

# TENNESSEE RESERVOIR FISHERIES



## STATEWIDE MANAGEMENT REPORT 2015

**Tim Broadbent, Michael Clark John Hammonds, Mike Jolley, Lyle Mason,  
Jim Pipas, and Wm. Patrick Black**



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## TWRA Fisheries Report No. 17-01

By

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## TWRA Reservoir Fisheries Biologists

### **Regional Management Biologists:**

Region 1: Michael Clark – Supervising Fisheries Biologist (Jackson)

Clayton Boyd – Fisheries Biologist

Reggie Wiggins – Fisheries Biologist

Region 2: Lyle Mason – Supervising Fisheries Biologist (Nashville)

Brian James – Fisheries Biologist

Jim Pipas – Supervising Fisheries Biologist (Nashville)

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Region 3: Mike Jolley – Supervising Fisheries Biologist (Crossville)

Brandon Ragland – Fisheries Biologist

Brian Letner – Fisheries Biologist

Chris Morton – Fisheries Biologist

Region 4: John Hammonds – Supervising Fisheries Biologist (Morristown)

Jim Negus – Fisheries Biologist

Shaun Ramsey – Fisheries Biologist

### **Statewide Coordination and Analysis**

Fisheries Management Division (Nashville):

Wm. Patrick Black – Reservoir Fisheries Coordinator, Fisheries Statistics

Mike Bramlett – Age and Growth Analysis

Amy Adams – Administrative Support

## Introduction

Fishing in reservoirs and lakes is a major source of recreation for Tennessee residents and visitors. The state contains 31 large reservoir and 1 large natural lake representing about 500,000 surface acres of water. In 2011 anglers spent \$1.1 billion on fishing related expenditures in Tennessee (U.S Department of the Interior, 2014). Proper management of fishery resources is vital to maintaining sustainability and the Tennessee Wildlife Resources Agency (TWRA) is mandated to see this is accomplished. Proper management techniques include monitoring through surveys, habitat enhancement, research, and supplemental fish stocking. Data collected in the TWRA reservoir program are maintained in a central database.

This report is a presentation of survey statistics and management summaries for reservoirs managed by TWRA. It is intended that the report be used by biologists, administrators, and anglers as a snapshot of the status of fisheries throughout the state. The reported summaries are organized by TWRA regions, individual reservoirs within the regions, and individual species within each reservoir. The data summaries are organized so that ten years of population statistics for a reservoir may be viewed in a single table for each species within a reservoir. This saves the need to refer back numerous years to view trends in population statistics or find the most recent survey for a given location.

Multiple summaries are presented for each species including population parameters (growth, recruitment, and mortality), size structure, condition, creel survey statistics (Black, 2015), and stocking summaries. Different sampling gears are used for different species and these are listed in the tables along with parameters. In some cases, different gears and methods are used for different species and different population parameters. Gear differences also exist for the variety of reservoirs as some gears are not as effective of some water bodies. However, standardized gears and techniques were employed in data collection as much as possible to make meaningful comparisons among reservoirs possible.

Within each reservoir section, the TWRA Regional Biologists provide a written summary to highlight issues, positive outcomes, and recommendations for that reservoir. Any recommendations are a starting point for the discussion of needs, harvest restrictions, and stocking requests and should not be construed as “what will be done”. Recommendation related to allowable size and harvest limits are discussed extensively among TWRA staff and submitted for public review prior being voted on by the Tennessee Fish and Wildlife Commission in October of each year

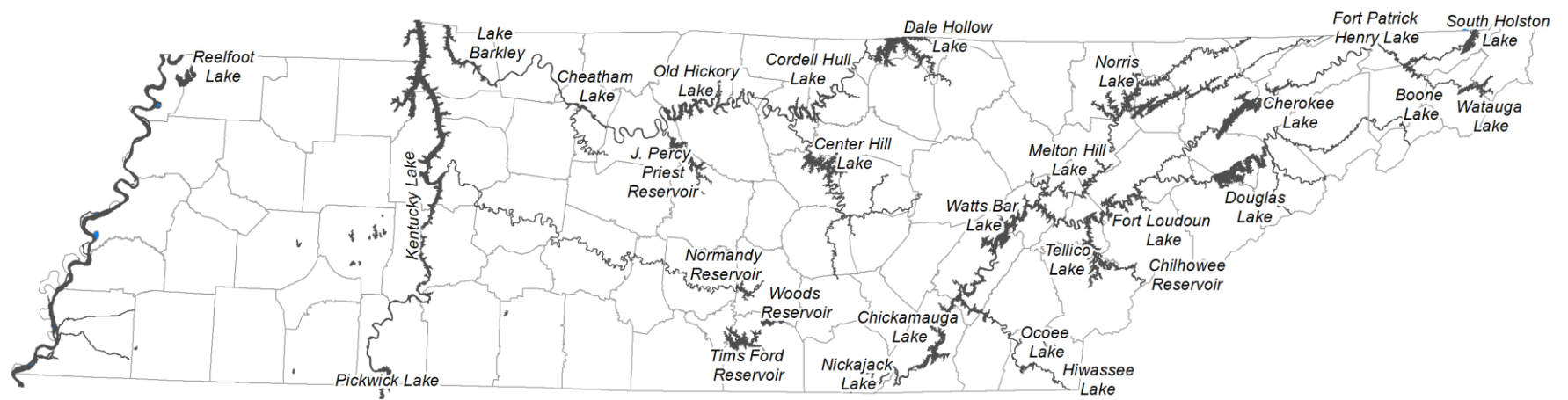


Figure 1 Distribution of major reservoirs (including Reelfoot Lake) in Tennessee.

Table 1. Surface Acreage of Tennessee Reservoirs Greater Than 500 Acres. Reelfoot Lake is included.

Reservoir	Acreage in Tennessee	Total Acres	Data Source*
Barkley	18,300	57,420	3
Boone	4,520		1
Caulderwood	541		1
Center Hill	18,220		2
Cheatham	7,450		2
Cherokee	30,300		1
Chickamauga	34,500		1
Chilhowee	1,750		1
Cordell Hull	11,960		2
Dale Hollow	23,200	27,700	3
Douglas	30,600		1
Ft. Loudoun	14,600		1
Ft. Patrick Henry	872		1
Great Falls	3,080		1
Guntersville	1,156	67,900	3
John Sevier	786		3
J. Percy Priest	14,200		2
Kentucky	108,217	160,300	3
Melton Hill	5,690		1
Nickajack	10,370		1
Normandy	3,048		3
Norris	34,200		1
Old Hickory	22,500		2
Parksville	1,890		1
Pickwick	6,159	43,100	3
Reelfoot L.	10,427		3
South Holston	6,336	7,580	3
Tellico	16,056		3
Tims Ford	10,600		1
Watauga	6,430		1
Watts Bar	39,000		1
Woods	3,660		3
<b>Total</b>	<b>500,618</b>		

\*1. TVA 1980

\*2. U.S. Army Corps  
of Engineers 1978

\*4. TWRA 2006

## Methods

Fishery surveys were conducted using standard methods described in *Reservoir Fisheries Assessment Guidelines* (TWRA, 1998). Gears employed for surveys included boat-mounted electrofishers, trap nets, gill nets, and larval tow nets. Uses of various gear types to monitor sport fish recruitment, mortality, growth, and density were determined at the discretion of the management biologist, and was based on the methods which historically have provided the best estimates for each parameter on a given water body. Efforts were made to distribute the sampling effort across the reservoir to provide a representative sample. Generally, black bass and adult crappie parameters were measured with electrofishing; young-of-year crappie abundance was measured with trap nets and larval tow nets; and *Percid* and *Morone* parameters were measured using gill nets. Water quality was monitored on select reservoirs where fish habitat has been limited historically during the summer months. Measurements were taken with dissolved oxygen / temperature probes at incremental depths throughout the water column.

Creel survey data were collected using the methods described in *Tennessee Statewide Creel Survey 2014 Results* (Black, 2015). Data were collected using roving surveys. Interviews were conducted on-site and face-to-face with full-time creel clerks. Standard question related to determining fishing effort, fishing success, catch rates, catch, harvest, expenditures, and sociological information were asked. Data were entered by IT staff at the TWRA central office and creel estimates and analysis were performed by the TWRA Fisheries Management Division in Nashville, TN.

Habitat enhancements were performed by regional staff and in partnership with the angling public. Fish attractors included submerged cedar and Christmas trees, stake beds, plastic fish attractors, and concrete reef balls. Shoreline stabilization was conducted largely with bald cypress plantings in fluctuation zones and on shoreline points. Aquatic macrophyte plantings and grass seeding in fluctuation zones also occurred at several reservoirs. Methods of plant establishment varied depending on location of objective in establishment.

Fishery data were recorded in the field on datasheets by hand. Data was entered into relational TWRA databases using WinFin software (J. Francis, 2001). Data were analyzed using WinFin data analysis software to produce summaries, population parameters, and indices. Regional biologists analyzed these summaries to produce the tables within this document. Original WinFin outputs and summary reports were retained by the biologists and stored in regional files. All datasets were sent to the reservoir program coordinator at the end of the survey year for incorporation into the statewide reservoir



# Region 1

## Barkley Reservoir - 2015

### Description

Area (acres): TN: 10,350; TOTAL: 57,290 Mean Depth (feet): 15' Shoreline (miles): Total – 1,004

Counties: Stewart, Montgomery, Cheatham Reservoir Length: Total 118 miles  
Drainage: 2,343 sq. miles TN: 72 miles  
TN: 982 sq. miles

Total Fishing Effort (angler hours): Total Value by Anglers: \$

Summer Pool: 359 MSL (57,290 acres) Winter Pool: 354 MSL (45,210 acres)

Tennessee Only: 359 MSL – 20,851 acres; 354 MSL – 16,276 acres

Canal connecting Kentucky and Barkley Reservoirs located at CRM 32.8. Canal= 1.75 miles in length

### Management Strategies:

**Striped Bass/Hybrid Striped Bass:** 15" MLL, 2 fish – 1987

**LMB:** Creel limit reduced from 10 to 5 - 1997

15" MLL, 5 fish creel – 2001

**Crappie:** 10" MLL, 30 fish creel – 1997

**White Bass:** 30 fish creel limit – 1989

**Redear Sunfish:** 20 fish creel – 2008

Creel limit reduced to 15 - 2005

**Sauger:** 15" MLL, 15 fish creel – 1998

15" MLL, 10 fish creel - 2001

### Habitat Enhancement and Monitoring

2015 – None

#### Angling Pressure (Angler Hours Per Acre)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Total Angler Pressure	12.3	13.3	12.7	9.8	NA	NA	NA	22.2	15	16	12.1
Black Bass	5.29	4.2	4.8	4.3	NA	NA	NA	6.3	5.3	7.5	4.6

#### Tournaments (BITE)

Tournaments <sup>BITE</sup>	4	2	2	2	2	2	0				4
Lbs/Angler Day <sup>BITE</sup>	3.8	3.87	3.73	3.73	5.54	5.87	--				4.1
Fish/Angler Day <sup>BITE</sup>	1.6	1.76	1.5	1.5	2.2	2.33	--				1.8
Angler Hours <sup>CREEL</sup>											
Catch Rate <sup>CREEL</sup>											

#### Value of Fishery (Trip Expenditures in Thousands)

Black Bass	332.3	267.3	410.5	441.5	NA	NA	NA	494.4	920.1	712	477.7
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## Largemouth Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Spring Electro hours</b>	2	2	2	2	2	2	2	2	2	2	2
<b>Fall Electro hours</b>	2.22	2.65	3.54	3.85	3.46	2.68	5.6	3.7	5.18	3.8	2.73
<b>Recruitment</b>											
Age-1 CPUE	--	2.3	--	--	7	29.3	3.8	--	--	--	11.9
Substock CPUE (Spring)	13	3.5	9.5	24	8.5	19	6.5	11	17.5	7	12.4
<b>Spring Density (n)</b>	153	183	209	223	239	196	222	142	192	127	179
PSD	69	72	52	36	50	85	81	63	78	75	62
RSD Preferred	33	38	22	14	24	31	34	28	41	33	27
CPUE	76.5	91.5	104.5	111.5	119.5	98	111	71	96	63.5	89.7
CPUE ≥ Stock	63.5	88	95	87.5	111	79	104.5	60	78.5	56.5	77.3
CPUE ≥ MSL (15")	21.5	32.5	20.5	31.5	27	15	35.5	16.5	32	18.5	21.3
<b>Fall Density (n)</b>	168	179	378	378	429	275	438	307	352	299	242
Fall Total CPUE	77.3	70.5	116.5	78.5	122.6	106.9	87.5	80.9	66.7	80.4	83.3
Fall CPUE Substock	3.2	11.3	22.1	5.6	12.1	7.4	13.2	7.6	4.4	5.3	8.4
Fall CPUE>Stock	74.1	59.2	94.5	72.9	110.5	99.4	74.4	73.4	62.4	75.1	74.7
<b>Growth</b>											
Mean TL at Age-1	--	165	--	--	128	178	134	--	--	--	156.8
Mean TL at Age-3	--	332	--	--	--	--	305	--	--	--	302.5
<b>Mortality</b>											
Total Mortality	--	33% r2=0.85	--	--	--	--	42% r2=0.8	--	--	--	
<b>Relative Weight (Fall)</b>											
Stock	92	115	99	97	99	89	96	89	107	95	96
Quality	88	97	95	90	97	90	94	91	91	97	92
Preferred	92	100	97	107	95	93	96	94	98	96	96
Memorable	103	102	105	106	97	91	92	102	91	--	103
Trophy	--	--	--	--	--	--	--	--	--	--	
<b>Fishing Success</b>											
Catch Rate	1.11	1.3	2.01	1.63	NA	NA	NA	1.03	0.94	0.82	1.2
Harvest Rate	0.19	0.15	0.24	0.16	NA	NA	NA	0.11	0.1	0.14	0.1
% Released	98	98	98	99	NA	NA	NA	91	90	85	97
Mean Weight	2.69	1.79	2.58	2.14	NA	NA	NA	3.39	2.85	2.88	2.2

**FISHERY FORECAST**

Largemouth bass experienced good recruitment thirteen of the last sixteen years (2002, 2007, 2012 below average) and these fish have recruited well to quality sizes. Total CPUE has exceeded 60 LMB/hour since 1991 although fluctuations have occurred in recruitment. Size structure indices showed quality fish in the population and relative stock indices exceeded the acceptable range; increased recruitment has increased stock size fish in the population and these fish recruited well to quality sizes. Recruitment levels in section 3 exceeded levels in sections 1 and 2 (2.7, 6.7, and 14.0 in Sections 1, 2, 3, respectively). Total catch rates were higher (81.3, 57.3, 46.0 in sections 1,2,3, respectively) in the two most down-stream sections. The density of larger fish ( $\geq 15$ " ) has increased overall and has improved over levels seen in the mid-1990's; 23% and 26% of the largemouth bass collected in the Spring and Fall, respectively, were larger than the minimum size limit (15"). Fall electrofishing surveys showed recruitment of young-of-year largemouth bass to the fall was below the 10-year average; stock size fish appeared to be abundant and Wr's were acceptable.

Anglers spent 7.5 hours per acre seeking all black bass. However, it was felt the majority of these hours were spent seeking largemouth bass since smallmouth bass and spotted bass are scarce. Catch rates were good and harvest rates were poor with over 85% of the fish caught released.

In 2015, anglers spent \$6.54 per hour seeking black bass and were willing to spend an additional 41% to fish for black bass on Barkley Reservoir. Trip expenditures exceeded the 10 year average by 49%. The total value of the black bass fishery was estimated at \$712,030, the highest in the 21<sup>st</sup> century.

**MANAGEMENT RECOMMENDATIONS:**

Continue with the 15-inch minimum size limit with a five fish per day creel limit.

## Spotted Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Spring Electro hours</b>	2	2	2	2	2	2	2	2	2	2	2
<b>Fall Electro hours</b>	2.22	2.65	3.54	3.85	3.46	2.68	5.6	3.7	5.18	3.8	2.7
<b>Recruitment</b>											
Age-1 CPUE	--	--	--	--	--	--	--			--	
Substock CPUE	0.5	0	3	0	1	0	1.5	2.5	0	1	0.7
<b>Density</b>											
<b>Spring Density (n)</b>	21	22	26	22	44	14	19	43	27	40	22.7
PSD	55	73	75	73	48	100	56	58	56	100	61
RSD Preferred	20	18	20	5	10	40	19	13	11	100	16
CPUE	10.5	11	13	11	22	7	9.5	21.5	13.5	20	11.2
CPUE ≥ Stock	10	11	10	11	21	7	8	19	13.5	19	10.5
CPUE ≥ Preferred	2	2	2	0.5	2	1	1.5	2.5	1.5	4.5	1.4
<b>Fall Density (n)</b>	15	21	14	17	16	7	41	52	31	45	14.7
Fall Total CPUE	5.8	9.2	3.5	4.3	4.4	--	6.9	14.7	9.3	10.6	6
Fall CPUE Substock	0.3	1.6	0.2	1.2	1	--	3.3	0.2	2.6	2.2	0.9
Fall CPUE ≥ Stock	5.5	7.6	3.3	3.2	3.4	--	3.6	14.5	6.7	8.4	5
Fall CPUE ≥ Preferred	0.3	0.7	0.4	0	0	--	0	0.1	0.2	0.9	0.4
<b>Relative Weight</b>											
Stock	103	107	103	91	109	--	--	93	100	107	100
Quality	107	99	85	96	101	--	--	92	92	93	98
Preferred	114	85	92	--	--	--	--	83	95	93	96
Memorable	--	--	--	--	--	--	--	--	--	--	
Trophy	--	--	--	--	--	--	--	--	--	--	
<b>Fishing Success (Spotted bass only)</b>											
Relative Catch Rate	--	0.02	--	--	NA	--	NA	0.06	0.15	0.14	0.09
Relative Harvest Rate	--	0	--	--	NA	--	NA	0	0	0	0.0
% Released	--	100	--	--	NA	--	NA	94	99	98	98
Mean Weight	--	--	--	--	NA	--	NA	1.81	--	1.16	1.81

In the Spring 25%, 63%, and 12% of the spotted bass were collected in Sections 1, 2, and 3, respectively; in the fall 87%, 7%, and 6% of the spotted bass were collected in Sections 1, 2, and 3, respectively. Although spotted bass densities increased in Spring and Fall sampling, catches by anglers were rare.

## White Crappie

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment (Trap Net Survey)</b>											
Age-0 CPUE	--	--	2.8	3.1	5.5	--	7.9	--	--	--	<b>3.3</b>
Substock CPUE	0.7	0.6	2.3	3.4	6.7	4.4	7.6	5.6	7.9	6.6	<b>4.6</b>
Total CPUE	10.3	1.6	3.5	6.1	9.8	11.8	10.6	6.7	9.3	10.1	<b>7.9</b>
Net Nights	32	32	32	32	32	32	32	32	32	32	<b>32</b>
n	328	46	111	194	312	427	339	215	298	322	<b>256.8</b>
<b>Fall Density (Electrofishing Survey)</b>											
PSD	91	100	99	88	94	92	90	99	98	93	<b>94</b>
RSD Preferred	78	87	80	41	69	78	66	85	86	74	<b>69</b>
CPUE	38.9	29.9	32.2	12.8	52.4	31.1	20	17.8	39.1	24.3	<b>38.7</b>
CPUE ≥ Stock	38.9	29.9	31.8	12.8	52	31.1	20	17.8	39.1	23.9	<b>40.8</b>
CPUE ≥ MSL (10")	30.1	29.9	28.6	5.5	35.8	24.6	13.8	14.3	33.3	10.6	<b>29.6</b>
n	86	78	114	51	190	98	119	93	199	97	<b>107</b>
Fall Hours	2.22	2.65	3.54	3.85	3.46	2.68	5.6	3.7	5.18	3.8	<b>2.74</b>
<b>Growth (Fall)</b>											
Mean TL at Age-0	--	--	96	78	88	--	85	--	--	--	<b>86</b>
Mean TL at Age-2 Fall	--	--	283	--	--	--	263	--	--	--	<b>283</b>
<b>Mortality</b>											
Total Mortality	--	--	33% r2=68	--	--	--	40% r2=0.77	--	--	--	
<b>Relative Weight (Fall)</b>											
Stock	94	--	111	197	94	90	112	99	122	90	<b>110</b>
Quality	129	101	108	100	113	102	112	91	99	110	<b>106</b>
Preferred	100	110	108	104	109	97	105	96	101	102	<b>101</b>
Memorable	94	102	102	102	106	96	99	94	99	96	<b>96</b>
Trophy	--	--	--	--	--	--	--	--	--	--	
<b>Angling Pressure (Angler Hours per Acre)</b>											
All Crappie	3.7	5	3.6	2.49	NA	NA	NA	3.32	1.8	3.06	<b>4</b>
<b>Fishing Success</b>											
Crappie Catch Rate	3.5	3	3.74	2.6	NA	NA	NA	1.87	2.02	2.2	<b>2.38</b>
Crappie Harvest Rate	2	1.8	2.41	1.46	NA	NA	NA	1.07	1.12	0.92	<b>1.27</b>
WC % Released	48	42	37	45	NA	NA	NA	50	40	64	<b>51</b>
WC Mean Weight	0.73	0.71	0.73	0.69	NA	NA	NA	0.76	0.78	0.78	<b>0.67</b>
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
All Crappie	92.8	125.4	130	111.1	NA	NA	NA	153.5	98.8	154.9	<b>119</b>

**FISHERY FORECAST:**

The white crappie population experienced poor year class strength in four of the last thirteen years (2004, 2006 – 2008; CPUE YOY crappie  $\geq 3.0$  equals average year class). However, recruitment has exceeded the acceptable density in the last six years. In 2015, recruitment appeared to be acceptable in Sections I and II (Section I: 5.2 YOY/net; Section II: 8.1 YOY/net). Reservoir wide recruitment was higher than the 10 year average; CPUE of stock size fish remained below the ten year average although RSD10 remained high. The PSD and RSD10 were indicative of a population with large individuals and were similar to historic data. The decline in CPUE greater than 10" in 2012 and 2013 may have been a result of poor recruitment in 2006 – 2008.

Historic creel data (no creel survey in 2010, 2011, 2012) showed catch and harvest rates were good and anglers released as many fish as they harvested. In 2015, catch and harvest rates remained good although harvest rates fell below historical levels. Overall, 63% of the crappie harvested by anglers were white crappie.

Anglers spent \$3.15 per hour seeking crappie and were willing to spend an additional 55% to fish for crappie on Barkley Reservoir. The total value of the crappie fishery was estimated at \$154,860.00 (30% increase over the 10 year average).

**MANAGEMENT RECOMMENDATIONS:**

Continue with the 10-inch minimum size limit and the 30 fish creel limit.

## Black Crappie

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment (Trap Net Survey)</b>											
Age-0 CPUE	--	--	0.5	1.1	--	--	0.8	--	--	--	<b>0.7</b>
Substock CPUE	1.6	0.5	0.5	1.1	2	2.4	1.4	5.8	1.5	3.7	<b>1.8</b>
Total CPUE	6	1.5	3	2.3	4.4	7.4	2.4	7	4	7.7	<b>5.2</b>
Net Nights	32	32	32	32	32	32	32	32	32	32	<b>32</b>
n	192	44	96	74	139	282	76	225	128	247	<b>171</b>
<b>Fall Density (Electrofishing Survey)</b>											
PSD	84	98	92	94	80	59	83	99	64	86	<b>81</b>
RSD Preferred	44	78	74	74	64	20	44	81	49	39	<b>38</b>
CPUE	55.8	72.3	54.1	21.6	43.9	25.5	28.8	17.4	30.7	54.9	<b>58.1</b>
CPUE ≥ Stock	55.8	72.3	49.4	20.3	34.8	25.5	28.7	17.4	30.2	54.3	<b>56.6</b>
CPUE ≥ MSL (10")	25.2	46.9	40.0	15.9	27.3	5	12.7	13.9	12.4	21.2	<b>19.6</b>
n	149	198	189	80	168	76	207	80	157	237	<b>168</b>
Fall Hours	2.22	2.65	3.54	3.85	3.46	2.68	5.6	3.7	5.18	3.8	<b>2.7</b>
% Black Crappie	63	72	62	61	47	46	64	46	44	71	<b>60</b>
<b>Growth (Fall)</b>											
Mean TL at Age-0 Fall	--	--	76	95	--	--	74	--	--	--	<b>82</b>
Mean TL at Age-2 Fall	--	--	272	--	--	--	224	--	--	--	<b>272</b>
<b>Mortality</b>											
Total Mortality	--	--	29% r <sup>2</sup> =93	--	--	--	33% r <sup>2</sup> =31	--	--	--	
<b>Relative Weight (Fall)</b>											
Stock	107	101	116	97	101	94	109	101	100	92	<b>100</b>
Quality	97	109	111	98	110	98	106	97	105	94	<b>99</b>
Preferred	93	104	102	101	104	88	102	91	89	101	<b>95</b>
Memorable	102	98	97	103	102	78	96	97	88	91	<b>94</b>

## FISHERY FORECAST

The black crappie electrofishing CPUE increased for the first time in seven years and was attributed to the increased electrofishing CPUE in all sections. However, trap net substock CPUE has been comparable during the last five years and trap net total CPUE and substock CPUE has been consistent.. The percentage of black crappie compared to white crappie percentage increased in 2015 and sectional catch rates were 52.0-, 86.0-, and 27 per hour in sections 1, 2, 3, respectively. Increased densities may be attributed to YOY catch rate in 2013 (5.8/NN). Historic creel data has shown acceptable relative catch rates although lower than seen for white crappie. The fishery forecast and management recommendations were the same as for white crappie.



## Redear Sunfish

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b>											
(Trap net)											
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--	
Substock CPUE	0.3	1	0.7	0.3	0.1	0.2	0.6	0.03	0.5	0.3	<b>0.4</b>
Total CPUE	2.5	32.8	4.3	2.6	1.6	3.5	1.6	0.4	1.6	0.5	<b>5.6</b>
Net Nights	32	32	32	32	32	32	32	32	32	32	<b>32</b>
n	80	105	136	84	52	119	50	13	52	17	<b>76</b>
<b>Spring Density (Electro Survey)</b>											
PSD	78	33	57	28	4	--	64	43	59	29	<b>32</b>
RSD Preferred	22	5	43	15	0	--	21	7	9	5	<b>12</b>
CPUE	4.5	23	33.5	51	11.5	--	66	23	18.5	32	<b>24.5</b>
CPUE ≥ Stock	4.5	22	30.5	40	11.5	--	65.5	22	17	10.5	<b>21.3</b>
CPUE ≥ Preferred	1	1	13	6	0	--	14	1.5	1.5	0.5	<b>2.9</b>
n	9	46	67	102	23	2	132	46	37	64	<b>44</b>
Spring Hours	2	2	2	2	2	2	2	2	2	2	<b>2</b>
<b>Angling Pressure (Angler Hours per Acre)</b>											
Sunfish	0.4	0.5	1.0	0.26	NA	NA	NA	0.6	0.47	0.18	<b>0.6</b>
<b>Fishing Success (Redear Sunfish only)</b>											
Relative Catch Rate	1.31	0.75	1	0.5	NA	NA	NA	0.26	0.05	0.16	<b>1.08</b>
Relative Harvest Rate	1.29	0.65	1.0	0.36	NA	NA	NA	0.13	0.02	0.12	<b>0.95</b>
Redear Mean Weight	0.38	0.51	0.52	0.42	NA	NA	NA	0.5	--	0.42	<b>0.5</b>
Redear % Released	23	20	3	20	NA	NA	NA	56	55	34	<b>20</b>
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
Sunfish	10.6	10.5	41.8	11.3	NA	NA	NA	13.8	13	11.8	<b>16.8</b>

## FISHERY FORECAST

Redear sunfish abundance appeared to decrease over historic levels. The majority of the redear sunfish were collected in the most northern section (94%).

## MANAGEMENT RECOMMENDATIONS:

Continue with the 20 fish creel limit implemented in 2008.

## Bluegill

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment (Trap Net)</b>											
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--	
Substock CPUE	3.2	1.3	8	1.7	1.4	1.1	9.7	0.6	3.3	2.1	<b>2.4</b>
Total CPUE	16	5.9	13.5	7.6	6.1	9.1	15.8	4.8	10.4	7.9	<b>9</b>
Net Nights	32	32	32	32	32	32	32	32	32	32	<b>32</b>
n	512	188	435	243	194	291	504	152	332	252	<b>286.4</b>
<b>Density (Electrofishing Survey)</b>											
PSD	11	25	26	31	37	50	37	31	27	35	<b>31</b>
RSD Preferred	0	0	0	2	1	3	1	2	1	2	<b>1</b>
CPUE	125.5	86	169	132	98.5	46.5	170.5	154	138	105	<b>102</b>
CPUE ≥ Stock	107	82.5	156.5	128	91.5	44	169.5	144.5	130	98	<b>95.9</b>
CPUE ≥ Preferred	0	0	0.5	2	0	0.5	1.9	3	1.5	1.5	<b>0.3</b>
n	251	172	338	264	197	93	341	308	276	210	<b>204</b>
Spring Hours	2	2	2	2	2	2	2	2	2	2	<b>2</b>
<b>Angling Pressure (Angler Hours per Acre)</b>											
Sunfish	0.4	<0.1	1.0	0.26	NA	NA	NA	0.6	0.47	0.18	<b>0.5</b>
<b>Fishing Success (Bluegill only)</b>											
Relative Catch Rate	7.5	7.19	6.73	5.47	NA	NA	NA	1.85	2.05	5.89	<b>5.1</b>
Relative Harvest Rate	4.34	5.32	5.29	3.44	NA	NA	NA	0.9	0.79	2.25	<b>3.3</b>
Bluegill Mean Weight	0.3	0.23	0.27	0.22	NA	NA	NA	0.4	0.35	0.37	<b>0.3</b>
Bluegill % Released	66	43	29	38	NA	NA	NA	64	65	72	<b>51</b>
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
Sunfish	10.6	10.5	41.8	11.3	NA	NA	NA	13.8	13	11.8	<b>16.8</b>

## FISHERY FORECAST

Bluegill were abundant but not at quality sizes to persuade anglers to actively seek this species; RSD values increased above historical levels and length frequencies show larger individuals in the population in 2011 and 2013. However, catch rates were typical of catch rates seen in other west Tennessee reservoirs. PSD-RSD's were similar between sections (46-3, 8-0, and 41-0, in sections 1, 2, 3, respectively).

Relative catch and harvest rates improved over historic levels and the quality of bluegill exceeded the 10 year average. These data reflect the increased RSD8 values seen during sampling surveys.

## MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

## Sauger

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Net Hours	8.8	14.6	13.4	No sample	11.3	No Sample	No Sample	No Sample	11.6	No Sample	12.02
n	234	35	30		71				37		53.9
<b>Recruitment (Gillnet Survey)</b>											
Age-1 CPUE	17.2	--	1.9		2.9				1.3		4.5
Substock CPUE	0	0.0	0.0		0				0		0.08
PSD	34	91	43		46				62		58
RSD Preferred	10	36	13		12				32		27
CPUE	24.7	1.4	2.3		5.5				3.9		2.3
CPUE ≥ Stock	24.7	1.4	2.3		5.5				3.9		2.3
CPUE ≥ MSL (15")	2.5	0.5	0.9		2.5				1.3		0.4
<b>Growth</b>											
Mean TL at Age-1				271					292		278
Mean TL at Age-3				379					410		412
<b>Relative Weight</b>											
Stock	87	137	92		87				NA		93
Quality	90	93	96		97				NA		88
Preferred	100	101	110		107				NA		94
Memorable	--	--	--		-				NA		
Trophy	--	--	--		--				NA		
<b>Mortality</b>											
Total Mortality		--	64% r2=75		70% r2=94						
<b>Stocking</b>											
Total No.			45410 fry					126,508	51,339	92,698	
2009 and 2011, 2012, 2013, 2015– No sample due to high water and high discharge during sampling period.											
<b>Angling Pressure (Angler Hours per Acre)</b>								2013	2014	2015	
Sauger								1.3	0.85	0.72	1.3
<b>Fishing Success</b>					2010	2011	2012	2013	2014	2015	
Catch Rate					NA	NA	NA	0.32	0.83	0.76	
Harvest Rate					NA	NA	NA	0.11	0.39	0.32	
Mean Weight					NA	NA	NA	1.61	1.57	1.44	
% Released					NA	NA	NA	54	43	56	
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
Sauger					NA	NA	NA	60.8	50.5	33.6	

## FISHERY FORECAST

CPUE in 2010 nearly doubled historic catch rates and the catch rate of legal size fish was six times the historic value. As with historic data, stock to quality size fish dominated the sample. Growth rates were similar between 2002, 2004, 2006, and 2008, but mortality rates have increased since the early 2000's. The mean length at age and maximum age were similar to populations observed below Pickwick Dam. During the creel survey, 72% of the fish measured were ≥ 16-inches and 10% were ≥ 18-inches.

Creel data revealed improved catch and harvest rates.

## MANAGEMENT RECOMMENDATIONS

Continue with the 15-inch minimum size limit and the 10 fish creel limit.

## Channel Catfish

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Net Hours</b>	8.8	14.6	13.4	No sample	11.3	No Sample	No Sample	No Sample	11.6	No Sample	<b>12</b>
<b>n</b>	21	28	453		10				2		<b>140.6</b>
<b>Recruitment (Gillnet Survey)</b>											
Age-1 CPUE	--	--	--		--						
Substock CPUE	1.4	1.7	22.2		0.4						<b>5.3</b>
Total CPUE	2.4	3.2	33.8		0.8						<b>12.1</b>
<b>Density</b>											
PSD	--	--	--		--						
RSD Preferred	--	--	--		--						
CPUE	2.4	3.2			--						<b>8.1</b>
CPUE ≥ Stock	1	1.5	11.6		0.4						<b>2.8</b>
CPUE > Quality	0	0.1	0.8		0						<b>0.3</b>
CPUE ≥ MSL (34")	0	0.0	0.0		0						<b>0</b>
<b>Angling Pressure (Angler Hours per Acre)</b>											
Catfish	--	--	--	2.1	NA	NA	NA		3.77	35.8	<b>1.8</b>
<b>Fishing Success</b>											
Catch Rate	3.2		0.89	0.88	NA	NA	NA	0.99	0.96	1.42	<b>1.04</b>
Harvest Rate	1.5	11.6	0.85	0.83	NA	NA	NA	0.68	0.59	0.94	<b>0.9</b>
% Released	0.1	0.8	11	5	NA	NA	NA	32	63	36	<b>12.6</b>
Mean Weight	0.0	0.0	2.05	2.24	NA	NA	NA	2.39	1.9	1.99	<b>1.98</b>
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
Catfish	41.3	58.0	58.8	70.3	NA	NA	NA	266.2	139.1	118.7	<b>183.3</b>

2009 and 2011, 2012, 2013, 2015 – No sample due to high water and high discharge during sampling period.

## FISHERY FORECAST

Historic data has shown channel catfish were the dominant species collected during sauger netting and harvested by anglers. In 2015, blue catfish dominated the angler harvest (77%).

## MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

## Gizzard Shad

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Fall Electro Hours</b>	2.22	2.65	3.54	3.85	3.46	2.68	5.6	3.7	5.18	3.8	<b>2.7</b>
<b>Recruitment</b>											
CPUE < 150 mm	0.3	24.5	11	11.9	98.8	70.2	32.3	44.1	46	24.5	<b>33.3</b>
CPUE ≥ 275 mm	6.8	10.6	18	0.4	0.4	1.5	3	0.5	0.2	2.9	<b>5.8</b>
<b>Density</b>											
Fall total CPUE	107.9	136.6	102.4	98.7	153.4	167	81.5	58.4	120.4	85.9	<b>123.1</b>
Fall CPUE Substock	13.4	36.3	24.2	29.1	106.5	113	38.4	29.4	69.2	31.9	<b>53.2</b>
Fall CPUE ≥ Stock	94.5	100.3	78.2	69.6	46.9	54	43.1	29	51.3	54	<b>76.1</b>
Fall total collected (n)	244	339	346	376	508	452	453	317	419	318	<b>330</b>

## DISCUSSION

CPUE was comparable to historic CPUE data in 2012 and 2013, but lower than 2014. CPUE varied as sampling progressed upstream (61.3 -, 49.8- and 146.6 per hour in Sections 1, 2, 3, respectively). Approximately 80-, 38-, and 19% of the gizzard shad collected in sections 1, 2 and 3, respectively were substock. Since Asian carp have been collected during surveys, Wr's were calculated for gizzard shad (2015: stock=95; stock-quality=95; 2014: stock=102; stock-quality=102; 2013: stock = 91; Stock-quality=92) and trend data will be monitored. In 2015, sectional stock Wr's were 103-, 85-, and 97 or sections 1, 2, 3, respectively.

## Threadfin Shad

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Density</b>											
Fall CPUE ≤ 75 mm	48.7	23.5	106.9	60	54.6	87.3	69.1	90	60.2	7.4	<b>63</b>
Fall Total CPUE	103.6	118.6	106.9	103.9	56.4	106.8	89.8	102.1	67	39.9	<b>96.5</b>
Fall total collected (n)	239	128	365	379	195	307	499	583	319	141	<b>239</b>

## DISCUSSION

As with gizzard shad, CPUE of threadfin shad fluctuated as sampling progressed upstream (68.7, 0.9, and 41 per hour in Section 1, 2, and 3 respectively). Size distributions were similar between sections and threadfin shad were collected at preferred sizes for predators.

## MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

## White Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Net Hours	8.8	14.6	13.4	No Sample	11.3	No Sample	No Sample	No Sample	11.6	No Sample	12
n	35	15	40		23				11		26.2
<b>Recruitment (Gillnet Survey)</b>											
Age-1 CPUE	--	--	1.1		--				--		0.6
Substock CPUE	0	--	0		0				0		0.2
Total CPUE	4	--	3		1.8				1		3.3
<b>Growth</b>											
Mean TL at Age-1	--		250		--				--		249
Mean TL at Age-3	--	--	364		--				--		330
<b>Mortality</b>											
Total Mortality	--	--	43% r2=73		--				--		

2009 and 2011, 2012, 2013 – No sample due to high water and high discharge during sampling period.

During creel survey, 14% of the white bass measured were greater than 14-inches.

## Striped Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Net Hours	8.8	14.6	13.4	No Sample	11.3	No Sample	No Sample	No Sample	0	No Sample	12
n	5	7	19		16				11.6		8.3
<b>Recruitment (Gillnet Survey)</b>											
Age-1 CPUE	--	--	0.9		--				0		0.6
Substock CPUE	--	--	0.05		0.5				0		
Total CPUE	--	--	3.08		1.4				0		
<b>Growth</b>											
Mean TL at Age-1	--	--	291		--						293
Mean TL at Age-2 Fall		--	583		415						583
<b>Mortality</b>											
Total Mortality	--	--									
<b>Stocking</b>											
Total No.	--	--	--								--

2009 and 2011, 2012, 2013 – No sample due to high water and high discharge during sampling period.

## Other Species Collected

<u>Species</u>	<u>Number Collected</u>	<u>Gear</u>	<u>Value</u>
Channel Catfish	1	Trap Net	<0.1
Flathead catfish	1	Trap Net	<0.1
Freshwater Drum	2	Trap Net	<0.1
Gizzard Shad	13	Trap Net	0.4
Logperch	1	Trap net	<0.1
Longear Sunfish	10	Trap Net	0.3
Orangespotted sunfish	3	Trap Net	0.1
River Redhorse	1	Trap Net	<0.1
Sauger	2	Fall Electro	<0.1
Silver carp	1	Fall electro.	0.5
Smallmouth Bass	1	Fall electro.	0.3
	2	Spring Electro	1.0
Spotted Bass	3	Trap Net	0.1
Spotted Sucker	5	Trap Net	0.2
Threadfin Shad	22	Trap Net	0.7
Warmouth	18	Trap Net	0.6
White Bass	1	Spring electro	<0.1
	2	Fall Electro	<0.1
Yellow Bass	77	Trap Net	2.4
Yellow Perch	1	Trap Net	<0.1

Several silver carp were seen in Hickman and Dyer Creeks during Fall sampling.

Value: Trap net - number per net night

Electrofishing - number per hour

Gill net - number per hour

## 2015 Water Quality Monitoring

The Tennessee valley experienced drought conditions in 2007 and 2008. Although drought conditions appeared to subside in 2009, drier conditions continued in the summer 2010 and 2011. The USACOE completed their work at Wolf Creek Dam (Cumberland Lake) but are continuing to work at Center Hill Dam. The work at Center Hill Dam should not affect flows through the Cumberland River. In 2009, water quality conditions at Barkley Reservoir improved over 2007 and 2008 readings. In 2013 -2015, surface water temperatures did not exceed 30 C during sampling dates in June, July and August.

At station 1 (CRM 78.1), dissolved oxygen levels remained above 4.0 ppm at all depths in June, July and August. Water temperatures at station 1 exceeded water temperatures at station 2 at all depths during all months sampled. Secchi disc readings were indicative of a riverine portion of a mainstream reservoir (105, 98, and 96 cm in June, July, and August, respectively). Conductivity ranged from 119- (June) to 102 (July); pH levels also fell within acceptable ranges (8.0, 7.8, 7.7 in June, July, and August, respectively). Alkalinity averaged 69 mg/l during June through August which was slightly lower than historic records.

At station 2 (CRM 105) water temperatures were cooler than seen downstream and dissolved oxygen level was acceptable at all depths each month. Secchi disc readings were slightly lower at the upstream station (90-, 100, 81 cm in June, July, and August, respectively). Conductivity readings were similar between stations and similar to historic data. Alkalinity averaged 77 mg/l during June – August.

**Sampling Stations:** CRM 78.0 and CRM 105.

## Kentucky Reservoir - 2015

### Description

Area (acres): TOTAL:160,300 TN: 108,217 Mean depth (feet) – 20' Shoreline (miles): 2,380

Counties: Stewart, Henry, Benton, Houston, Humphreys, Decatur, Perry, Wayne, Hardin

Total Fishing Effort 2015 (angler hours): 1,245,595 Total Value by Anglers 2015: \$9,758,210

1.75 mile long canal connecting Kentucky and Barkley Reservoirs located at TRM 25.3

Summer Pool: 359 MSL  
miles

Winter Pool: 354 MSL

Drainage area: 40,200 sq.

### Management Strategies:

*Striped Bass/Hybrid Striped Bass* – 15" MLL, 2 fish - 1987

#### LMB/SMB:

Creel limit reduced from 10 fish to 5 fish in 1997.  
13" MLL lakewide – 1998  
14" MLL north of TNRM 111.1 and  
13" MLL south of that point - 2000.  
14" MLL reservoir-wide -2001.  
15" MLL lakewide – 2003

*White Bass:* 30 fish creel limit - 1989

Creel limit reduced to 15 - 2005

*Crappie:* 10" MLL with 30 fish creel – 1997

*Sauger:* 14" MLL with 15 fish creel – 1992

14" MLL with 10 fish creel – 2001

15" MLL with 10 fish creel - 2014

*Redear Sunfish:* 30 fish creel limit - 2008

20 fish creel limit - 2013

### Habitat Enhancement and Monitoring

Shallow water fish attractors (stake beds) – 142

Cypress Tree Plantings – 122 trees

Deep water Fish attractors (refurbished) – 7 of 28

### Angling Pressure (Angler Hours per Acre)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Total Angler Pressure (hrs/acre)	13.8	13.7	13.7	16.8	12.9	13.1	14.8	12.5	10.3	11.5	13.4

### Black Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Angling Pressure (Angler Hours per Acre)											
All Black Bass	2	2.5	2.62	4.43	3.6	3.9	4.45	3.8	3.6	4.29	
Smallmouth	<0.1	0.0	<0.1	0.04	0	0	0.01	0.3	--	0.3	
Tournaments											
Tournaments <sup>BITE</sup>	2	6	19	12	0	0	0	0	0	0	
Lbs/Angler Day <sup>BITE</sup>	2.31	5.03	6.0	6.6	--	--	--	--			
Fish/Angler Day <sup>BITE</sup>	1.08	2.06	2.2	2.01	--	--	--	--			
Angler Hours <sup>CREEL</sup>											
Catch Rate <sup>CREEL</sup>											
Fishery Value (Trip Expenditures in Thousands)											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Black Bass	1,324	1,538	2,103	4,259	2,031	4,266.50	4,569.20	2,948.00	4,248	5,865.50	3,032.90
Smallmouth	4.5	0	2.5	27.1	0	0	2.5	16.1	--	13.2	7.8



## Largemouth Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Spring Electro hours</b>	6	6	6	6	6	6	6	6	6	6	6
<b>Fall Electro hours</b>	6.74	8.96	7.71	7.89	6.68	4.08	8.02	7.3	6.79	6.73	6.3
<b>Recruitment</b>											
Age-1 CPUE	11.7	--	--		12.5	11.2	--	--	--	--	15
Substock CPUE	10.8	15	33.0	43.5	17.7	7.8	18.3	10.5	11.2	7.3	17
<b>Spring Density (n)</b>	377	506	695	783	627	501	584	388	531	404	520
PSD	81	77	47	61	64	85	73	68	64	84	67
RSD Preferred	35	38	27	21	18	21	30	44	37	28	26
CPUE	62.8	84.3	115.8	130.5	104.5	83.5	97.3	64.7	88.5	67.3	83
CPUE ≥ Stock	52	70	82.8	87	86.8	76	79	54.2	77.3	60	66
CPUE ≥ MSL (15")	18.2	25.9	22.5	18.2	16	15.8	23.8	23.8	28.5	17	17
<b>Fall Density (n)</b>	239	451	676	385	383	398	396	433	345	298	338
Fall Total CPUE	35.5	56.1	91.3	63.5	60.4	109.9	46.1	71	57.3	50.2	57
Fall CPUE Substock	6.8	28.7	26.6	5.5	6.7	20.3	10.4	9.3	4.2	4.1	10.6
Fall CPUE>Stock	28.7	27.4	64.7	58	53.6	89.6	35.7	61.8	53.1	46.1	46
<b>Stocking (FLMB – 1,162 Acres)</b>											
# per Acre	--	--	--	--	--	--	--	--	--	189.5	
Total No.	--	--	--	--	--	--	--	--	--	220,198	
<b>Growth</b>											
Mean TL at Age-1	--	--	--	156	182	--		--	--	--	167
Mean TL at Age-3	--	--	--	--	334	--		--	--	--	339
<b>Relative Weight</b>											
Stock	95	105	92	98	98	96	91	88	93	104	96
Quality	94	95	93	89	89	93	88	86	88	93	91
Preferred	96	97	93	98	88	93	89	90	86	100	93
Memorable	99	98	95	98	90	88	93	90	82	92	96
Trophy	--	--	--	--	--	--	--	--		--	
<b>Mortality</b>											
Total Mortality				44%		--	--				
				r2=64							
<b>Fishing Success</b>											
Catch Rate	0.92	0.69	2.11	1.52	1.81	1.52	1.32	1.61	1.06	0.85	1.2
Harvest Rate	0.16	0.18	0.2	0.16	0.19	0.15	0.13	0.1	0.13	0.09	0.16
% Released	90	93	97	95	94	94	96	94	90	90	91
Mean Weight	2.61	2.75	2.65	2.8	2.31	2.5	2.44	2.63	2.59	2.53	2.55

## FISHERY FORECAST

Recruitment was below average in 2015 but recruitment has been fair to good in fourteen of the last sixteen years (2004, 2011 poor) following poor years in four of the previous seven years. Catch rates with electrofishing gear have remained  $\geq 60$  fish/hour since 1998. In addition, densities of memorable size fish are comparable to densities observed in the early and mid1990's. RSD15 declined for the first time in four years. The decline of preferred size fish in the late 1990's to early 2000 was attributed to poor recruitment in the early 1990's (failures in 5 of 8 years).

After three consecutive years of poor Wr, Wr's improved in 2015. YOY LMB CPUE also declined below historic levels. Although Fall CPUE declined, data was comparable to historical fall rates and the length frequency distributions were similar to Spring levels.

Every five years, electrofishing sampling (2.0 hours – 8 sites) is conducted south of Beech River to Pickwick Dam. In 2010, 22 largemouth bass (11.0/hour – RSD15 = 28), 38 bluegill (19.0/hour – RSD8= 3), 16 redear sunfish (8.0/hour – RSD9 = 0), and 13 spotted bass (6.5/hour – RSD15 = 0) were collected. White (n=8) and Black crappie (n=4) were also collected. Densities were low and populations have not improved since 2005.

Largemouth bass were the most sought species by anglers. Fishing pressure was the third highest since 2006; catch rates by anglers seeking largemouth bass remained high. Creel data showed the fishing pressure was slightly higher in the northern section (66% northern section) and catch rates for black bass were higher in the northern section (0.97 (northern) - to 0.72 (southern) per hour catch rate). The length frequency distribution showed the majority of the largemouth bass harvested were < 400mm (69%) and anglers continue to release over 90% of largemouth bass caught.

Electrofishing catch rates varied in each section of the reservoir:

Relative Value	Section I		Section II		Section III	
	Spring	Fall	Spring	Fall	Spring	Fall
CPUE	69.5	25.8	81.0	40.8	51.5	118.0
CPUE YOY	11.5	2.3	6.5	4.9	4.0	6.0
CPUE RSD15	18.0	8.7	23.0	20.7	10.0	34.0

Anglers seeking black bass spent \$8.35 per hour seeking bass and were willing to spend an additional 51% to fish for bass on Kentucky Reservoir. The total value of the bass fishery was \$5,865,470.

#### **MANAGEMENT RECOMMENDATIONS:**

Continue with the 15-inch minimum size limit and the 5 fish per day aggregate creel limit.

## Smallmouth Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Spring Electro Hours</b>	6	6	6	6	6	6	6	6	6	6	6
<b>Fall Electro Hours</b>	6.74	8.96	7.71	7.89	6.68	4.08	8.02	7.3	6.79	6.73	6.3
<b>Recruitment</b>											
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--	--
Substock CPUE	0.3	0.2	--	0	1.8	0.7	2.3	0.2	1.3	0.8	0.6
<b>Spring Density (n)</b>	5	9		2	17	10	29	3	24	11	8
PSD	67	25	43	50	50	50	57	80	44	50	63
RSD Preferred	33	25	29	50	50	50	29	--	38	33	46
CPUE	0.8	1.5	1.7	0.3	2.8	1.7	4.7	0.5	4	1.8	1.4
CPUE ≥ Stock	0.5	1.2	1.7	0.3	1	1	2.3	0.3	2.7	1	0.9
CPUE ≥ Preferred	0.2	--	0.5	0.2	0.5	0.5	0.7	0	1.7	0.3	0.4
<b>Fall Density (n)</b>	3	7	10	3	1	5	7	17	12	6	4
Fall Total CPUE	0.3	0.8	1.3	0.5	--	0.9	0.7	1.7	1.8	--	0.6
Fall CPUE Substock	--	0.3	0.4	0.1	--	0.7	0.4	0.4	1	--	0.5
Fall CPUE>Stock	0.3	0.5	0.9	0.4	--	0.2	0.3	1.3	0.8	--	0.5
Fall CPUE > P	0.1	0.1	0.3	0	--	0	0	0.1	0.2	--	0.2
<b>Growth</b>											
Mean TL at Age-1	--	--	--	--	--	--	--	--	--	--	
Mean TL at Age-3	--	--	--	--	--	--	--	--	--	--	
<b>Mortality</b>											
Total Mortality	--	--	--	--	--	--	--	--	--	--	
<b>Relative Weight (Fall)</b>											
Stock	--	83	106	90	--	--	84	83	86	--	92
Quality	92	89	94	--	--	83	--	68	80	--	92
Preferred	86	--	88	--	--	--	--	72	--	--	91
Memorable	--	--	99	--	--	--	--	--	70	--	99
Trophy	--	--	--	--	--	--	--	--	--	--	
<b>Fishing Success (Smallmouth only)</b>											
Catch Rate	--	--	0	0.65	0	0	1.09	0.13	0.02	0.1	0.3
Harvest Rate	--	--	0.0	0	0	0	0	0	0	0.02	<0.01
% Released	92	--	99	80	0	0	95	90	85	99	64
Mean Weight	3.73	--	3.7	2.15	0	0	2.35	3.96	4.29	3.34	2.8

## FISHERY FORECAST

The density of smallmouth bass remains low in Kentucky Reservoir, although quality fish have been caught during tournaments. Only 11 and 6 smallmouth bass were collected during Spring and Fall sampling, respectively.

Smallmouth bass electrofishing catch rates are very low on Kentucky Reservoir (usually less than 10 fish collected lakewide). In addition, historical creel survey data has shown smallmouth bass harvest to be less than 0.04 fish/hour and catch and release to be less than 0.2 fish/hour. Percent effort (those anglers seeking smallmouth bass) has consistently been below 3%. These data reflect a low density smallmouth bass population and a black bass population dominated by largemouth bass.

## MANAGEMENT RECOMMENDATIONS

No recommendations.

## Spotted Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Spring Electro Hours</b>	6	6	6	6	6	6	6	6	6	6	<b>6</b>
<b>Fall Electro Hours</b>	6.74	8.96	7.71	7.89	6.68	4.08	8.02	7.3	6.79	6.73	<b>6.3</b>
<b>Recruitment</b>											
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--	
Substock CPUE	--	--	--	0.7	0.3	0.7	2.2	0	0.1.0	0.3	<b>0.5</b>
<b>Spring Density (n)</b>	51	56	32	28	36	49	34	5	43	25	
PSD	100	57	80	46	41	84	71	80	33	74	<b>53</b>
RSD Preferred	33	--	30	25	6	31	24	0	3	4	<b>28</b>
CPUE	8.5	9.3	5.3	4.7	6	8.2	5.7	0.8	7.2	4.2	<b>8</b>
CPUE ≥ Stock	8.2	8.3	5	4	5.7	7.5	3.5	0.8	6.7	3.8	<b>7.2</b>
CPUE ≥ Preferred	0.5	2	1	1	0.3	2.3	0.8	0	0.2	0.2	<b>1.3</b>
<b>Fall Density (n)</b>	16	49	33	11	11	14	31	17	8	22	<b>28</b>
Fall total CPUE	2.6	5.6	3.5	1.3	2.3	2.9	3.6	2.6	1.2	4.7	<b>4.7</b>
Fall CPUE Substock	0.7	1.1	0.5	0.3	0.8	2.1	1.3	0.4	0.5	0.8	<b>1.4</b>
Fall CPUE ≥ Stock	1.9	4.5	3	1	1.5	0.9	2.3	2.3	0.7	3.9	<b>3.4</b>
Fall CPUE > P	--	0.7	0.2	0	0	0	0.1	0	0	0.4	<b>0.4</b>
<b>Relative Weight (Fall)</b>											
Stock	104	115	91	99	98	104	--	94	148	97	<b>101</b>
Quality	99	94	88	95	89	96	82	73	99	91	<b>93</b>
Preferred	--	101	100	--	--	--	91		--	106	<b>100</b>
Memorable	--	--	--	--	--	--	--		--	--	<b>97</b>
Trophy	--	--	--	--	--	--	--		--	--	
<b>Fishing Success (Spotted bass only)</b>											
Relative Catch Rate	0.07	0.19	0.17	0.04	0.01	0.04	0.1	0.06	0.05	0.06	<b>0.08</b>
Relative Harvest Rate	0.01	0.04	0.02	0.01	0	0.01	0.01	0	0	0	<b>0.01</b>
% Released	87	76	87	80	0	--	92	89	88	92	<b>68</b>
Mean Weight	1.23	1.59	1.21	0.96	0	--	1.2	0.94	1.1	0.94	<b>1</b>

## White Crappie

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment (Trap Net Survey)</b>											
Age-0 CPUE	3.6	5	3.8	4.4	11	0.3	--	--	--	--	<b>5.3</b>
Substock CPUE	3.4	4.8	3.4	4	11.9	1.4	4.9	7.4	13.3	16.1	<b>5.5</b>
Total CPUE	6.8	6.5	4.5	4.5	13.4	2.9	6.4	8.7	14.5	23.7	<b>7.4</b>
Net Nights	112	110	112	111	111	112	111	112	112	110	<b>110</b>
n	766	461	508	500	1,483	329	707	971	1,625	2,603	<b>787</b>
<b>Fall Density (Electrofishing Survey)</b>											
PSD	92	84	91	91	92	80	94	95	95	84	<b>90</b>
RSD-P	95	97	64	63	78	50	53	77	72	65	<b>69</b>
CPUE	53.5	58.9	43.9	43.7	47.3	72.1	63.1	63.3	40.5	45.3	<b>44</b>
CPUE ≥ Stock	53.3	58.7	43.9	42.9	45.7	71.8	62.5	63	40.5	41.9	<b>45</b>
CPUE ≥ MSL (10")	20.1	30.9	39.3	25.7	34.9	37.4	32.8	48.2	28.7	27.1	<b>24</b>
n	301	461	364	366	355	279	525	971	304	291	<b>287</b>
Fall Hours	6.74	8.96	7.71	7.89	6.68	4.08	8.02	7.3	6.79	6.73	<b>6.3</b>
<b>Growth (Fall)</b>											
Mean TL at Age-0	85	81	77	79		129	--	--	--	--	<b>83</b>
Mean TL at Age-2	269	--	--	--		159	--	--	--	--	<b>259</b>
<b>Mortality</b>											
Total Mortality	53% r2=0.55	--	--	--		53% r2=0.97	--	--	--	--	
<b>Relative Weight (Fall)</b>											
Stock	108	133	101	127	117	137	100	120	113	97	<b>107</b>
Quality	103	109	105	110	109	108	102	103	106	105	<b>103</b>
Preferred	98	103	99	106	105	100	98	101	97	99	<b>100</b>
Memorable	98	98	97	103	109	95	89	95	96	100	<b>97</b>
Trophy	--	--	--	--	--	--	--	--	--	--	
<b>Angling Pressure (Angler Hours per Acre)</b>											
All Crappie	6.2	5.9	6.04	6.1	5.1	4.1	4.41	4.56	3.58	3.59	<b>5.9</b>
<b>Fishing Success</b>											
Crappie Catch Rate	2.55	2.72	2.59	2.16	2.85	2.07	2.58	2.02	1.95	1.95	<b>2.4</b>
Crappie Harvest	1.26	1.49	1.67	1.23	1.57	1.03	0.77	1.02	0.92	0.79	<b>1.2</b>
WC % Released	52	46	41	47	44	49	74	49	53	60	<b>48</b>
WC Mean Weight	0.73	0.71	0.75	0.69	0.69	0.73	0.85	0.78	0.8	0.81	<b>0.74</b>
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
All Crappie	1,560	1,454	2,008	2,678	1,342	2,073	2,515	3,080.10	1,804.60	1,947.20	<b>1,708</b>

## FISHERY FORECAST

Although white crappie have experienced erratic recruitment since 2000, the white crappie population remained high quality and electrofishing densities were comparable to historic levels; preferred size fish CPUE declined but remained above the 10-year average. Total CPUE of white crappie increased from 2002 – 2007 but declined in 2008 and 2009 and was attributable to low recruitment in four of the previous eight years. The Tennessee valley experienced drought conditions during 2007, 2008, June through December, 2010, and the summer of 2011 and 2012. However, water levels were higher than normal in Spring 2010 and 2011, and crappie apparently experienced good reproduction and recruitment due to higher, more stable water levels in 2010. However, recruitment did not mirror that scenario with similar conditions in 2011. Under similar drought conditions in 1984 – 1988, crappie experienced poor recruitment and crappie fishing declined from 1989 – 1992. CPUE of YOY white crappie in trap net surveys was 2.1, 4.4, and 48.9 in sections I, II, and III, respectively. Acceptable YOY/NN levels in sections I, II, and III were 2.0, 5.0, and 10.0, respectively. The mean length of white and black collected during electrofishing surveys was 9.98- and 8.2-inches, respectively.

Spring targeted sampling for crappie showed an abundance of preferred size white crappie but few numbers of black crappie (87% white crappie). Stock-quality sized white crappie were not abundant in the population and was attributed to poor recruitment from 2013.

Black crappie densities have been comparable to white crappie trap net densities since 2000 and densities have been highest in the most northern section (86% in 2011; 83% in 2012; 74% in 2013; 59% in 2014; 59% in 2015). In Sections 1, 2 and 3, black crappie comprised 78-, 46- and 42% of crappie collected during 2014 fall electrofishing surveys, respectively. Black crappie comprised 37% of the crappie caught by anglers.

Crappie were the second most sought species on Kentucky Reservoir and catch rates by anglers have remained above 2.0 fish/hour in 9 of the last 12 years; mean weight of white crappie harvested has also remained above 0.75 pounds during the last three years. However, the poor 2011 – 2013 year classes negatively impacted angler harvest rates in 2014 and 2015 and the poor recruitment in the most northern section (< 2.0 in four of the last seven years) will negatively impact angler harvest rates in the Big Sandy area.

Sampling surveys showed the catch rate of crappie  $\geq$  10-inches have decreased but remained above the 10-year average. Trap netting surveys showed over-all average recruitment of young-of-year white crappie has been acceptable in the 21<sup>st</sup> century. However, sectional comparisons showed white crappie recruitment (YOY) was lowest in the two most northern section (Section 1: 2.1/net night; Section 2: 4.4/net night), and acceptable in section 3 (48.9/net night) (acceptable levels: SI-2.0; SII-5.0; SIII-10/.0). CPUE of YOY white crappie has declined below historical levels in seven of the last thirteen years in the most southern section (2005, 2007, 2010, 2012, 2014, 2015 - good) and four of the last six years in the most northern section. Although crappie electrofishing catch rates declined as sampling progressed downstream, the decline may be partly attributed to availability of cover at reduced water levels and not actual population density.

Black crappie densities have appeared to stabilize, and relative catch rates showed a catch and harvest rate of 0.56- and 0.20/hr, respectively. The majority of the fishing pressure for crappie was in the northern section (77%) and lakewide fishing pressure has declined slightly with the improved bass fishing since 2009. The mean length of white and black crappie harvested by anglers in 2012 was 292-- and 283 mm, respectively.

Anglers fishing for crappie spent \$3.22 per hour fishing for crappie and were willing to spend an additional 56% to fish for crappie on Kentucky Reservoir. The total value of the fishery was estimated at \$1,947,180. Anglers seeking crappie in the northern and the southern section of the reservoir spent \$3.12 and \$3.52 per hour fishing for crappie, respectively.

## Black Crappie

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment (Trap Net Survey)</b>											
Age-0 CPUE	1.3	1.1	0.7	1.5	5	0.7	--	--	--	--	<b>1.9</b>
Substock CPUE	1.4	1.1	0.7	1.4	5.2	0.9	0.8	1.9	3.4	2.4	<b>2</b>
Total CPUE	5.4	4.4	2.9	3.6	8	5.4	3.2	5	5.8	4.8	<b>5.6</b>
Net Nights	112	110	112	111	111	112	111	112	112	110	<b>111</b>
n	602	486	320	402	882	606	353	556	651	531	<b>616</b>
<b>Fall Density (Electrofishing Survey)</b>											
PSD	87	94	93	86	82	64	74	92	68	70	<b>79</b>
RSD Preferred	43	54	64	63	54	28	35	44	36	21	<b>46</b>
CPUE	24	38	48.0	21.3	23.7	58.6	32.4	29.8	58.4	64.9	<b>30.9</b>
CPUE ≥ Stock	23.8	38	48.0	20.9	22.8	57.5	31.5	27.5	58.1	56.9	<b>30.6</b>
CPUE ≥ MSL (10")	10.5	20.2	31.1	13.5	11.8	16.4	9.9	13.4	20.5	13.4	<b>13.7</b>
n	231	416	330	131	184	240	285	246	334	420	<b>227</b>
Fall Hours	6.74	8.96	7.71	7.89	6.68	4.08	8.02	7.3	6.79	6.73	<b>6.3</b>
% BC vs. WC	43	47	48	26	34	46	34	38	52	59	<b>44</b>
<b>Growth (Fall)</b>											
Mean TL at Age-1	79	73	80		99	--	--		--	--	<b>78</b>
Mean TL at Age-2	--	--	--		232	--	--		--	--	<b>244</b>
<b>Mortality</b>											
Total Mortality	--	--	--		58% r <sup>2</sup> =0.96	--	--		--	--	
<b>Relative Weight (Fall)</b>											
Stock	94	97	97	116	102	102	98	91	111	97	<b>100</b>
Quality	94	99	99	102	94	103	93	93	93	90	<b>97</b>
Preferred	97	97	99	102	94	103	92	91	91	91	<b>97</b>
Memorable	92	96	95	98	93	99	86	96	88	77	<b>94</b>
Trophy	--	--	--	--	--	--	--	--	--	--	
<b>Fishing Success (Black Crappie only)</b>											
Relative Catch Rate	0.58	0.94	1.11	0.79	1.08	2.07	0.69	0.42	0.54	0.56	<b>0.7</b>
Relative Harvest	0.31	0.51	0.76	0.44	0.59	1.03	0.28	0.23	0.26	0.2	<b>0.4</b>
BC % Harvested	47	47	34	48	45	49	59	41	50	65	<b>43</b>
BC Mn Wt	0.74	0.79	0.94	0.82	0.83	0.73	0.82	0.77	0.78	0.78	<b>0.8</b>
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
All Crappie	1,560	1,454	2,001	2,677	1,342	2,073	2,515	3,080.10	1,804.60	1,947.20	<b>1,708</b>

## Redear Sunfish

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment (Trap Net)</b>											
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--	
Substock CPUE	2.8	12.6	1.7	0.3	0.3	0.4	7.6	2.7	18.5	9.1	<b>2.5</b>
Total CPUE	4.8	14.5	2.5	1	1.5	1.4	8.5	3.3	19.2	10	<b>3.6</b>
Net Nights	112	110	112	111	111	112	111	112	112	110	<b>111</b>
n	533	1,595	281	110	167	153	940	367	2,151	1,094	<b>404</b>
<b>Spring Density (Electrofishing Survey)</b>											
PSD	71	62	66	62	71	89	69	91	87	81	<b>70</b>
RSD Preferred	41	28	16	24	28	52	38	48	42	37	<b>34</b>
CPUE	43.7	29.3	27.5	46.2	17.3	36.3	39.2	9.8	50.2	20.8	<b>36.5</b>
CPUE ≥ Stock	37.8	25.2	16.7	41.5	14.8	35.3	38.5	9.7	43.7	17.7	<b>31.2</b>
CPUE ≥ Preferred	15.5	7.2	2.7	9.8	4.2	18.5	14.5	4.7	21.2	6.5	<b>10.2</b>
n	259	176	165	277	104	218	235	59	301	125	<b>215</b>
Spring Hours	6	6	6	6	6	6	6	6	6	6	<b>6</b>
<b>Growth</b>											
Mean TL at Age-1	--	--	--	--	--	--	--	--	--	--	
Mean TL at Age-3	--	--	--	--	--	--	--	--	--	--	
<b>Mortality</b>											
Total Mortality								--		--	
<b>Angling Pressure (Angler Hours per Acre)</b>											
Sunfish	0.46	0.39	0.57	0.4	0.3	0.59	0.66	0.69	0.42	0.69	<b>0.5</b>
<b>Fishing Success (Redear Sunfish only) *Catch rate for anglers seeking redear sunfish</b>											
Relative Catch Rate	0.62	0.95	0.85	0.2	0.65	0.5	0.52	0.27	0.41	0.86*	<b>0.65</b>
Relative Harvest Rate	0.35	0.64	0.53	0.17	0.48	0.38	0.31	0.23	0.3	0.61*	<b>0.5</b>
Redear Mean Weight	0.48	0.52	0.51	0.42	0.47	0.51	0.66	0.48	41	0.5	<b>0.5</b>
Redear % Released	39	30	32	24	34	24	37	27	35	29	<b>27</b>
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
Sunfish	119.8	112.9	168.6	111.3	60.4	179.6	327.9	212.3	193	379	<b>116</b>

## FISHERY FORECAST

Angler redear sunfish catch and harvest rates have been inconsistent from year to year on Kentucky Reservoir and showed a moderate decline since 2001. This trend along with increased sunfish fishing pressure since 1999 and a slight decline in CPUE through electrofishing surveys have resulted in management concerns for redear sunfish. Redear sunfish have the potential to be over-harvested due to concentration of their spawning areas. Once these areas have been located anglers tend to harvest the majority of the fish caught and can negatively impact populations in specific areas. Since the redear population on Kentucky Reservoir has recently become popular and redear sunfish are not multiple spawners, the species was prone to over-harvest. Since 2003 the angler harvest of redear sunfish has declined every year in the northern section of Kentucky Reservoir following the boom year of 2000 (5.8 redear sunfish harvested per hour). As expected by anglers, over 84% of the redear sunfish were caught in the northern section but relative catch rates were higher in the southern section (0.41- vs 0.59).



Redear densities were similar to historic data and sub-stock CPUE has increased during trap net surveys during the last two years. The CPUE of preferred size fish has also increased above the 10-year average during two of the last four years. Electrofishing catch rates were variable in the three sections (Section I: 19.5/hour and RSD9 - 59%; Section II: 20.5/hour and RSD9 – 46%; Section III: 19.5/hour and RSD9 - 8%).

The trip expenditure data were the same as for bluegill.

### **MANAGEMENT RECOMMENDATIONS**

Provide redear sunfish information to the angler and media to increase opportunity for this species. The 30 fish creel limit for redear sunfish implemented in 2008 was reduced to a 20 fish creel limit in 2013.

## Bluegill

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment (Trap Net)</b>											
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--	
Substock CPUE	10.5	18.1	4.3	2.9	5.2	3.5	13.6	11.4	11.8	12.6	<b>6.3</b>
Total CPUE	17.2	29.4	9.7	7.7	8.1	7.4	20.7	15.9	20.7	16.9	<b>12.9</b>
Net Nights	112	110	112	111	111	112	111	112	112	110	<b>111</b>
n	1926	3233	1086	852	901	827	2,299	1,775	2,318	1,863	<b>1,421</b>
<b>Spring Density (Electrofishing Survey)</b>											
PSD	32	30	29	36	40	54	46	53	47	47	<b>39</b>
RSD Preferred	2	2	5	3	2	6	6	11	5	2	<b>3</b>
CPUE	89.5	133.5	159.7	121	89.7	97.2	76.7	40.3	113.5	86.3	<b>97.6</b>
CPUE ≥ Stock	76	111	115	118.2	83	89.8	74.8	38	109.8	70	<b>84.9</b>
CPUE ≥ Preferred	1.5	2.2	5.3	4	1.8	5.2	4.2	4	5.5	1.7	<b>2.4</b>
n	537	801	958	726	538	583	460	242	681	518	<b>589</b>
Spring Hours	6	6	6	6	6	6	6	6	6	6	<b>6</b>
<b>Angling Pressure (Angler Hours per Acre)</b>											
Sunfish	0.42	0.46	0.39	0.57	0.3	0.59	0.66	0.69	0.42	0.69	<b>0.6</b>
<b>Fishing Success (Bluegill only)</b>											
Relative Catch Rate	3.6	3.27	6.29	5.28	6.85	4.36	3.01	2.75	3.57	3.97	<b>5</b>
Relative Harvest Rate	1.88	1.75	3.70	2.99	4.03	3.05	1.36	2.07	1.83	2.43	<b>2.9</b>
Mean Weight	0.31	0.27	0.28	0.25	0.27	0.38	0.4	0.43	0.44	0.38	<b>0.3</b>
Percent Released	55	57	41	56	54	44	61	40	58	60	<b>49</b>
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
Bluegill	119.8	112.9	168.6	111.3	60.4	179.6	327.9	212.3	193	379	<b>116</b>

## FISHERY FORECAST

Historically the bluegill fishery has been typical of bluegill fisheries seen in other west Tennessee reservoirs. Catch rates were high but fish quality was low. In 2011 through 2014, RSD8 was the highest recorded although catch rates declined (cooler temps). However, the CPUE for bluegill with electrofishing gear was not representative of the population density. Bluegill comprised 90% of the estimated sunfish caught by anglers and the majority of the fishing pressure occurred in the northern section (90%). Sunfish catch and harvest rates were higher in the southern section (northern: 3.47 and 1.79 compared to southern: 4.30 and 1.53).

Anglers spent \$3.74 per hour fishing for sunfish and were willing to spend an additional 41% fishing for sunfish on Kentucky Reservoir. The total value of the sunfish fishery was estimated at \$378,960.

## MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

## Sauger

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b>	PW/			PW/	PW/						
<b>(gillnet)</b>	Duck			Duck	Duck						
Age-1 CPUE	0.1/0.2	--	1.4	2.5/0	1.1/0.1	4.6	0.2	1.52	26.6	--	<b>2.5/0.1</b>
Substock CPUE	0/0	0	0	0.1/0.0	0.0/0	0	0	0	0	0	<b>2.5</b>
Net Hours	19.30/13.1	15.3	22.5	17.8/ 71.7	9.6/ 42.8	30.2	10	5.25	5.1	18.4	<b>111</b>
n	78/60	124	64	114/94	89/53	154	31	40	191	165	<b>404</b>
<b>Density</b>											
PSD	95	84	69	54/89	87/94	--	--	-	40	--	<b>73/92</b>
RSD Preferred	15	11	14	19/69	34/40	--	--	--	22	--	<b>15/54</b>
CPUE	4.8/2.3	8.1	2.9	6.0/1.3	9.0/1.3	4.9	3.2	9.4	37.6	9	<b>8/1.6</b>
CPUE ≥ Stock	4.8/2.3	8.1	2.9	5.9/1.3	9.0/1.3	4.9	3.2	9.4	37.6	9	<b>7.4/1.6</b>
CPUE ≥ MSL-14" 15" 2014	1.6/1.3	2.8	0.9	2.6/1.1	5.9/1.0	0.2	0.6	1.9	5.2	3.9	<b>2.7/1.1</b>
<b>Growth</b>											
Mean TL at Age-1	286/267	298	298	274/270	279/290	273	276	295	281		<b>284/276</b>
Mean TL at Age-3	423/380	394	394	396/396	367/415	384	480	381	366		<b>390/397</b>
Mean TL at Age 5	--	--	--	--/372	447/413	--	--	--	--		<b>440/393</b>
<b>Mortality</b>											
Total Mortality			69% r2:92		69%/24% r2:75/ r2:26	83% r2=0.79	63% r2=0.4	--	70% R2=0.96		
<b>Wr (Winter)</b>											
Stock	110	101	87	100/94	97/92	90	89	--	--	130	<b>96/93</b>
Quality	95	99	93	96/100	96/101	99	100	--	--	96	<b>96/101</b>
Preferred	95	96	94	97/100	102/94	106	107	--	--	95	<b>97/97</b>
Memorable											
Trophy											
<b>Angling Pressure (Angler Hours/Acre)</b>											
Sauger	1.2	0.9	1.17	0.91	0.7	0.07	0.65	0.11	0.24	0.1	<b>1.0</b>
<b>Fishing Success</b>											
Catch Rate	0.92	1.28	0.48	0.71	0.6	0.33	0.57	0.57	0.58	0.62	<b>0.79</b>
Harvest Rate	0.3	0.48	0.21	0.32	0.31	0.19	0.38	0.2	0.18	0.3	<b>0.4</b>
Mean Weight	1.27	1.27	1.29	1.5	1.34	1.18	1.21	1.65	1.46	1.74	<b>1.3</b>
% Released	63	57	60	58	45	63	32	68	71	58	<b>27</b>
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
Sauger	385	233	365	300	281	44.5	417.9	171.8	286.6	62.9	<b>274</b>

## FISHERY FORECAST

The sauger fishery provided winter fishing opportunity for anglers and the population continued to persevere, regardless of fishing pressure, discharge, or water levels. Fishing pressure appeared to be low, however the majority of that fishing pressure occurred in the area below the dam. In addition, a large percentage of the sauger population migrated below the dam to spawn. The fact high fishing pressure and the sauger population occur in the same area resulted in high total mortality rates seen with this population (average 72% in the last 10 years). Recruitment to catchable size increased in 2014 and 2015 and exceeded the 10-year average - possibly due to stocking sauger in 2013 (120,000) and 2014 (205,197). The CPUE of stock size fish was acceptable and the catch rate of fish ≥ 15-inches remained high.

Creel data revealed that the majority of the sauger harvested were larger than 400 mm (61%) (in 2006, 9% of the sauger measured were less than 14-inches). Catch rates increased slightly in 2012-2015, but remained below historic levels.

All of the total fishing pressure was in the southern section. Historical data revealed harvest rates were higher in the southern section and percent effort was greater in the southern section. But, larger fish were harvested by anglers in the northern section. During the last three years, discharge through the gates has limited sauger fishing below Pickwick Dam.

Genetic analysis was conducted on Kentucky Reservoir in 2006 to determine if genetic differences existed between the sauger population at Pickwick and the sauger population at Duck River. Creel data has shown that sauger harvested at Duck River were larger than those harvested at Pickwick. Electrophoretic results showed very little variation between the two populations. In fact there was little variation between the sauger populations sampled in other Tennessee reservoirs. The size differences harvested by anglers were attributed to lower fishing pressure and increased numbers of larger sauger in the Duck River area.

Anglers spent \$3.57 per hour fishing for sauger and were willing to spend an additional 65% to fish for sauger on Kentucky Reservoir. The total value of the sauger fishery was estimated at \$62,890.

## **MANAGEMENT RECOMMENDATIONS**

Sauger fishing has been poor over the last several years with low recruitment and low densities of adult fish. However, the angler viewpoint of the sauger fishery is still positive as indicated by the willingness to spend an additional 65% to fish for sauger.

A 15-inch minimum size limit with a 10 fish per day creel limit was implemented on March 1, 2014.. Increasing the size limit will increase the protection of spawning females from 14% at 14" to 31% at 15". The increased protection for adult females may help improve survival and recruitment of age 1 fish into the population. In addition, over 120,000-, 205,197-, and 133,294 sauger were stocked below Pickwick Dam in 2013, 2014, and 2015 respectively. However, without a minimum size limit, the sauger fishery would be non-existent in Kentucky Reservoir.

## Blue Catfish

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment (Gillnet Survey)</b>											
<b>PW/Duck</b>											
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--	
Substock CPUE	--	--	--	0.3	0.3/0.0	--	0.1	--	--	--	<b>0.3/0</b>
Net Hours	19.3	15.3	22.5	89.5	9.6/42.8	30.2	10	--	5.1	18.4	<b>23.3</b>
n	--	--	1	24	3/0	0	5	--	0	1	<b>10</b>
<b>Angling Pressure (Angler Hours per Acre)</b>											
Catfish	3.1	3.3	2.5	3.2	2.2	4.04	4.18	2.86	2.07	2.63	<b>3.4</b>
<b>Fishing Success</b>											
Catch Rate	0.55	0.52	0.76	0.81	1	1	1.16	1.52	1.04	1.27	<b>0.7</b>
Harvest Rate	0.46	0.41	0.60	0.69	0.79	0.73	0.72	1.13	0.8	0.93	<b>0.6</b>
% Released	26	34	28	22	25	32	36	24	24	25	<b>23</b>
Mean Weight	2.24	1.92	2.24	2.53	1.42	2.06	2.36	2.3	2.01	2.9	<b>2.2</b>
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
Catfish	605	594	597	866	455	1,500	1,797	2,177.80	974.5	1,288.60	<b>1,063</b>

## FISHERY FORECAST

The forecast for the catfish fishery remained good with catch rates increasing over historic data. Angler pressure continued to be high and catch rates remained acceptable. Over 67% of the catfish caught were blue catfish, followed by channel catfish (32%) and flathead catfish (<1%). The majority of the catfish pressure was in the northern section (52%), and catch rates were similar between sections (all catfish – 1.52 and 1.07 catch rate for the northern and southern section, respectively).

Anglers spent \$2.85 fishing for catfish and were willing to spend an additional 59% to fish for catfish on Kentucky Reservoir. The total value of the catfish fishery was estimated at \$1,288,640. Trip expenditures for the northern section and the southern section were \$2.24 and \$3.43, respectively.

## MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

## Striped Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
	<b>PW/Duck</b>										
Net Hours	19.3	15.3	22.5	17.7	9.6/42.8	30.2	10	5.25	5.1	18.4	<b>14.3/43</b>
n	18	17	13	1	Jun-00	29	8	1	2	2	<b>17/0</b>
<b>Recruitment (Gillnet Survey)</b>											
Substock CPUE	0.5	0.1	0.2	--	0.6/0	0	0.1	--	--	---	<b>1.1</b>
Age1 CPUE	0.5			--	0.8		--	--	--	--	<b>2.3/0</b>
<b>Density</b>											
PSD	--	--	100	--	--		--		--	--	<b>60</b>
RSD Preferred	--	--	0	--	--		--		--	--	<b>0</b>
CPUE	1	1.2	0.5	--	0.8/0	1	0.8		--	--	<b>1.7/0</b>
CPUE ≥ Stock	--	1.2	-	--	0.1/0	1	0.7		--	--	<b>1.2</b>
CPUE ≥ MSL (15")	--	--	--	--	0/0	0	0		--	--	
<b>Growth</b>											
Mean TL at Age-1	285	--	--	291	271		--		--	-	<b>277</b>
Mean TL at Age-3	512	--	--	--	--		--		--	--	<b>524</b>
<b>Mortality</b>											
Total Mortality		--	--	--			--		--	--	
<b>Angling Pressure (Angler Hours per Acre)</b>											
Striped Bass	<0.1	0.13	<0.1	0.3	0.08	0.03	0.05	0.2	<0.1	0.03	<b>0.16</b>
<b>Fishing Success (Striped Bass only)</b>											
Catch Rate	0.21	0.17	0.33	0.62	0.59	0.58	0.14	0.02	0.27	0.33	<b>0.38</b>
Harvest Rate	0.1	0.06	0.21	0.16	0.42	0.33	0	0	0.04	0.11	<b>0.16</b>
Mean Weight	7.03	10.8	6.56	10.96	7.8	4.4	3.9	5.05	2.96	15.44	<b>6.9</b>
Percent released	54	69	42	75	43	51	81	80	80	77	<b>65</b>

## FISHERY FORECAST

The fishery for striped bass and Cherokee Bass were dependent upon either natural reproduction or migration from other waters stocked with these species. Striped bass or Cherokee Bass have not been stocked in Kentucky Reservoir since the late 1980's. Striped bass apparently produced a good year class in 2002 with good densities of age 1 fish in the population in 2003 and over 4 fish collected per hour in winter surveys, 2004. The majority of striped bass collected in 2011 were stock size indicating a successful spawn in 2010.

## MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

## Hybrid Striped Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
	PW/Duck										
Net Hours	19.3	15.3	22.5	17.8	9.6/42.8	30.2	10	5.25	5.1	18.4	13.03
n	0	1	5	0	0/0	0	2	1	0	1	6.4
<b>Recruitment (Gillnet Survey)</b>											
Substock CPUE	--	--	--	--	--	--	--	--	--	--	0
<b>Density</b>											
PSD	--	--	--	--	--	--	--	--	--	--	--
RSD Preferred	--	--	--	--	--	--	--	--	--	--	--
CPUE	0	0.6	0.2	--	--	--	--	--	--	--	0.6
CPUE ≥ Stock	--	--	--	--	--	--	--	--	--	--	1.4
CPUE ≥ MSL (15")	--	--	--	--	--	--	--	--	--	--	1.2
<b>Growth</b>											
Mean TL at Age-2	--	--	--	407	--	--	--	--	--	--	--
<b>Mortality</b>											
Total Mortality	--	--	--	--	--	--	--	--	--	--	--
<b>Angling Pressure (Angler Hours per Acre)</b>											
Hybrid Striped Bass	--	--	--	--	--	--	--	--	--	--	--
<b>Fishing Success (Hybrid Striped Bass only)</b>											
Catch Rate	--	--	--	--	0	--	--	0	0	--	--
Harvest Rate	--	--	--	--	0	--	--	0	0	--	--
Mean Weight	0	16.7	--	--	0	--	1.07	2.45	--	--	4.43
Percent released	100	0	--	--	0	--	63	33	--	--	59

## White Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
	PW/Duck	PW	PW	PW	PW/Duck	PW					
Net Hours	19.30/26.3	15.3	22.5	17.8	9.6/42.8	30.2	10	5.25	5.1	18.4	14.3
N	17/4	60	111	95	56/2	25	51	46	7	30	56
<b>Recruitment (Gillnet Survey)</b>											
Substock CPUE	0	--	0	0	0	0/0	0	0	0	0	0
PSD	81	97	96	96	100/100		100	100	71	100	95/100
RSD Preferred	57	92	37	52	79/0		86	65	57	87	65/0
CPUE	0.9	8.6	5.0	5.9	6.4/0.1	0.8	5.5	8.1	1.4	1.6	4.7/0.1
CPUE ≥ Stock	--/--	8.6	5	5.9	6.4/0.1	0.8	5.5	8.1	1.4	1.6	5.3/0.1
CPUE ≥ Preferred	--/--	7.4	2	3.1	5.1/0.1	0.4	4.9	4.9	0.8	1.4	3.5/0.1
<b>Growth</b>											
Mean TL at Age-2	329/	--	--	307	--		--	--	--	--	318
Mean TL at Age-3	332/	--	--	350	--		--	--	--	--	350
<b>Relative Weight</b>											
Stock	90	--	87	--	--/--	--	--	--	--	--	88
Quality	84	--	93	94	94/--	112	--	--	--	--	88
Preferred	92	--	92	99	100/107	94	--	--	--	--	97/107
Memorable	106	--	90	--	--	92	--	--	--	--	91
Trophy				--	--	--	--	--	--	--	
<b>Mortality</b>											
Total Mortality	--	--	--	--	--	--	--	--	--	--	--
<b>Angling Pressure (Angler Hours per Acre)</b>											
White Bass	0.27	0.23	0.26	0.33	0.29	NA	0.18	0.13	0.19	0.17	0.15
<b>Fishing Success (White Bass only)</b>											
Catch Rate	1.98	1.2	2.09	1.72	1.64	NA	4.06	2.11	2.67	2.39	2.13
Harvest Rate	0.71	0.65	0.76	0.71	0.42	NA	2.55	1.12	1.59	1.54	1
Mean Weight	0.75	0.75	0.85	0.6	0.68	0.79	1.1	1.11	55	63	0.77
Percent Released	58	64	72	69	61	65	54	65	0.99	1.2	59
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
White Bass	44	54	58	82	48	NA	119.6	200.8	169.3	119.8	86

## FISHERY FORECAST

The white bass fishery was dependent on discharge and water levels at the spawning areas (usually below dams). Anglers seeking this species experienced a boom-bust type fishery and recruitment to older ages was limited. In 2013 and 2014, total CPUE exceeded historic data and preferred size fish appeared to be abundant; 93% of the fishing pressure for white bass was in the southern section. Anglers seeking this species spent \$3.82 per hour fishing for this species and were willing to spend an additional 75% to fish for the true basses on Kentucky Reservoir. The total value of the fishery was estimated at \$119,830.

## MANAGEMENT RECOMMENDATIONS

The creel limit was reduced to 15 in 2005. Work with the Tennessee Valley Authority to identify critical spawning periods of white bass and identify discharge rates and water levels necessary for successful white bass spawning and recruitment.

Continue with the 15 fish creel limit for white bass.



## Yellow Perch

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b>											
Substock CPUE									--	--	
<b>Spring Density (n)</b>			3		1					4	<b>5.1</b>
PSD	-	--	80	--	40	--	--	--		--	<b>40</b>
RSD Preferred	-	--	60	--	40	--	--	--		--	<b>50</b>
CPUE	-	--	1.1	--	1.2	--	--	--		--	<b>1.2</b>
CPUE ≥ Stock	-	--	0.6	--	0.8	--	--	--		--	<b>0.7</b>
<b>Fishing Success</b>											
Catch Rate	--	--	--	--	--	--	--	--	--	--	
Harvest Rate	--	--	--	--	--	--	--	--	--	--	
% Released	--	--	--	--	--	--	--	--	--	--	
Mean Weight	--	--	--	--	--	--	--	--	--	--	

## FISHERY FORECAST

Reports have been received that yellow perch were sought by a small percentage of anglers and larger fish were being caught in the mouth of major creeks. Report have been received that fish up to one pound have been harvested. However, the fishery is nearly non-existent in the reservoir and the majority of the fish collected during electrofishing surveys were less than 10-inches

## Gizzard Shad

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Fall Electro Hours</b>	6.74	8.96	7.71	7.89	6.68	4.08	8.02	7.3	6.79	6.73	<b>6.3</b>
<b>Recruitment</b>											
CPUE < 150 mm	2.4	21.5	2.1	24.7	68	32.6	6	17.9	9.7	45.6	<b>14.4</b>
CPUE ≥ 280 mm	3.7	5.3	0.1	4.5	31	1.6	3.6	50.4	6	4.3	<b>12.4</b>
<b>Density</b>											
Fall total CPUE	64.7	99.2	62.1	95.8	118.3	127.9	61.5	74.4	53.2	99.7	<b>82</b>
Fall CPUE Substock	18.1	62.8	25.6	43.1	87.2	66.2	14.8	24	6.4	58.1	<b>34.5</b>
Fall CPUE ≥ Stock	46.6	36.4	36.5	52.7	31	61.7	46.8	50.4	46.8	41.6	<b>48.5</b>
Fall total collected (n)	383	611	481	540	694	428	449	615	318	702	<b>432</b>

## DISCUSSION

CPUE of adult and YOY gizzard shad has fluctuated in the 21<sup>st</sup> century with apparent high densities in 2015. CPUE was varied as sampling progressed upstream (144.9 -, 55.3-, and 98.0 per hour in Sections 1, 2, 3, respectively). Approximately 61-, 44-, and 66 % of the gizzard shad collected in sections 1, 2 and 3, respectively were substock. Due to the presence of Asian carp, the 2015 Wr for gizzard shad in sections 1, 2, and 3 were 91, 89, and 85 for stock size fish, respectively. Wr's in 2014 were 86, 88, and 92 for stock size fish in sections 1, 2, and 3.

## Threadfin Shad

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Fall Electro Hours</b>	6.74	8.96	7.71	7.89	6.68	4.08	8.02	7.3	6.79	6.73	<b>6.3</b>
<b>Density</b>											
Fall CPUE < 75 mm	45.4	73.9	96.2	18.5	62.6	121	53	47.3	46.2	30.3	<b>59.5</b>
Fall Total CPUE	96.3	117.9	97.2	48.8	67.8	133.5	108.2	108.2	55.7	34.8	<b>108</b>
Fall Total collected (n)	609	883	847	317	476	548	759	671	325	252	<b>591</b>

## DISCUSSION

As with gizzard shad, CPUE of threadfin shad fluctuated as sampling progressed upstream (18.3-, 30.7-, and 76.0 per hour in Section 1, 2, and 3 respectively). Size distributions were similar between sections and threadfin shad were collected at preferred sizes for predators. The over-all density of threadfin shad was similar to the 10-year average.

## Other Species Collected

Species	Number Collected	Gear	Value
Blue catfish	1	Sauger gill net PW	0.5/hour
	1	Trap net	<0.1/net night
Blue Sucker	1	Gill Net PWT Targeted	0.1/hour
Channel Catfish	1	Trap Net	<0.1/net night
	2	Gill Net PWT	0.5/hour
Flathead Catfish	1	Trap Net	<0.1/net night
Freshwater Drum	19	Trap Net	0.2/net night
	1	Sauger gill net PW	0.6/hour
Gizzard Shad	58	Trap Net	0.5/net night
Golden Shiner	1	Trap Net	<0.1/net night
Hybrid striped bass	1	Gill Net PWT Targeted	0.1/hour
Logperch	9	Trap Net	0.1/net night
Longear Sunfish	452	Trap Net	4.1/net night
Orangespotted Sunfish	164	Trap Net	1.5/net night
Redear Sunfish	1,094	Trap Net	10.0.net night
Shorthead redhorse	1	Gill Net PWT Targeted	0.1/hour
Skipjack Herring	1	Sauger gill net PWT	0.1/hour
	1	Fall electrofishing	0.2/hour
Spotted Bass	25	Spring Electrofishing	4.2/hour
	22	Fall Electrofishing	3.3/hour
	2	Trap net	<0.1/net night
Spotted Gar	1	Trap Net	<0.1/net night
Spotted Sucker	5	Trap Net	0.1/net night
Striped Bass	2	Targeted gill net PWT	0.1/hour
Threadfin Shad	99	Trap Net	0.9/net night
Walleye	1	Targeted gill net PW	0.1/hour
Warmouth	52	Trap Net	0.5/net night
White Bass	30	Targeted gill net PWT	1.8/hour
	5	Spring electrofishing	0.8/hour
	20	Fall electrofishing	3.0/hour
	3	Trap net	<0.1/net night
Yellow Bass	230	Trap net	2.1 /net night
Yellow Perch	4	Spring electrofishing	0.7/hour
	2	Fall Electrofishing	0.3/hour
	1	Trap net	<0.1/net night

Trap Net = 110 NN  
Spring Electro – 6.0 hours

Targeted gill net – 16.4 hours  
Fall Electro – 6.73 hours

Sauger gill net – 2.0 hrs

## 2015 Water Quality Monitoring

The Tennessee valley experienced drought conditions in 2007, 2008 and summer – fall 2010. Drought conditions also persisted in summer, 2011 and 2012. These conditions coupled with the USACOE work on Wolf Creek Dam (Cumberland Lake) and the Center Hill Dam resulted in reduced flows through the Cumberland River system. While the work at Center Hill Dam continues, the Wolf River Dam project was completed in 2015. The conditions on Barkley Reservoir also impacted Kentucky Reservoir since the two reservoirs are connected via a canal at TNRM 25.0.

In 2015, summer air temperatures were lower than historical records and water temperatures were lower than seen in previous years.

### JUNE

Dissolved oxygen levels fell below 4.0 ppm below 45' at station 1 and below 24' at station 5. Dissolved oxygen levels measured less than 4.0 ppm at all depths at station 6. Water temperatures fell between 27.9 and 28.6 °C at the surface (warmer temps at most southern stations). Secchi disc, pH, conductivity, and alkalinity readings averaged 65 cm (2014 - 103 cm), 7.6 (2014-7.4), 151 umhos/cm (2014 - 67 umhos/cm), and 54 mg/l (2014 - 45 mg/l) – lower levels in most southern stations.

### JULY

All parameters fell within acceptable levels and water temperatures varied very little between surface and bottom readings at all the main river stations. Dissolved oxygen fell below 4.0 ppm at BSRM 6 (15'). Secchi disc, pH, conductivity, and alkalinity readings averaged 79 cm (2014-79 cm), 7.8 (2014-7.3), 155 umhos/cm (2014-171 umhos), and 44 mg/l (2014- 46 mg/l). Water clarity has declined since 2013.

### AUGUST

Water temperatures varied very little between surface and bottom readings at all stations (<1°C). Dissolved oxygen levels fell below 4.0 ppm in the Big Sandy (BSRM 2.0 below 18'), TNRM 100.5 at 21', and TNRM 189.9 at 18'. Secchi disc, pH, conductivity, and alkalinity averaged, 80 cm (2014 - 154 cm), 7.7 (2014-7.6), 115 umhos/cm (2014 - 118 umhos/cm), and 56 mg/l (2014 - 44 mg/l).

### Sampling Stations

TNRM 62.4  
BSRM 2.0  
TNRM 100.5  
TNRM 135.6  
TNRM 159.0  
TNRM 189.9

## Pickwick Reservoir - 2015

### Description

Area (acres): TN: 6,159; TOTAL: 43,100 Mean Depth (feet): 21' Shoreline (miles): Total - 496  
 Counties: Hardin Reservoir Length: TN – 6 miles; Total: 52 miles Drainage Area: 32,820 sq.mile  
 Total Fishing Effort (angler hours): 90,433 Total Value by Anglers: \$550,810  
 Summer Pool: 414.0 MSL Winter Pool: 408.0 MSL Impounded: 1938

### Management Strategies:

**Striped Bass/Hybrid Striped Bass:** 15" MLL, 2 fish – 1987

**Crappie:** 10 fish creel limit – 1989

9" MLL, 30 fish creel – 1997

**LMB:** Creel limit reduced from 10 to 5 -1997

15" MLL, 5 fish creel – 2003

**White Bass:** 30 fish creel limit - 1989

Creel limit reduced to 15 - 2005

**Redear Sunfish:** 20 fish creel limit - 2008

**SMB:** 15" MLL - 2003 – 2007

18" MLL – 2008; 15" MLL – 2013

**Sauger:** 15" MLL, 15 fish creel – 1998

15" MLL, 10 fish creel - 2001

### Habitat Enhancement and Monitoring

2013 - None.

### Angling Pressure (Angler Hours per Acre)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Angler Pressure	13.9	19	11	20.1	NA	NA	NA	14.7	18	14.7
Black Bass (LMB, SPB)	6.37	9.23	5.4	7.8	NA	NA	NA	7.5	13	11.7
Smallmouth	0.5	0.1	0	0	NA	NA	NA	NA	0.04	--
Tournaments <sup>BITE</sup>	31	32	0	50	0	0	0	0	0	0
Lbs/Angler Day <sup>BITE</sup>	3.4	4.6	0	7.97	--	--	--	--	--	--
Fish/Angler Day <sup>BITE</sup>	1.6	2.2	0	3.43	--	--	--	--	--	--
Angler Hours <sup>CREEL</sup>										
Catch Rate <sup>CREEL</sup>										

### Value of Fishery (Trip Expenditures in Thousands)

Black Bass										
(LMB,SPB)	161	303.3	288.3	359.9	NA	NA	NA	1,176	768.7	796.2
Smallmouth	12.5	0.3	0.0	0	NA	NA	NA	NA	2	--

## Largemouth Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Spring Electro Hours</b>	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>Fall Electro Hours</b>	1.73	2.88	2.05	1.51	0.73	1.17	0.88	1.69	2.53	2.62
<b>Recruitment</b>										
Age-1 CPUE	21.4	19.7	--	--	55.3	17.7	--	--	--	--
Substock CPUE	21.3	24.7	26.7	42.7	38	11.3	16.7	19.3	27.3	11.3
<b>Spring Density (n)</b>	130	109	166	214	228	167	113	173	171	141
PSD	35	78	72	64	66	85	81	74	74	78
RSD Preferred	12	21	24	19	25	31	30	27	28	27
CPUE	86.7	72.7	111.3	142.7	152	111.3	75.3	115.3	114	94
CPUE ≥ Stock	65.4	48	84.7	100	131.8	100	58.7	96	86.7	82.7
CPUE ≥ MSL (15")	8	10	20.0	19.3	34.8	31.3	18	26	40	22
<b>Fall Density (n)</b>	106	114	163	168	129	131	122	178	171	95
Fall Total CPUE	69.3	39.6	79.3	131.5	163.4	114.1	121.8	157.2	112.9	40.9
Fall CPUE Substock	28.9	20	47.7	39	38.7	25.5	5.3	33.7	12.2	11.3
Fall CPUE>Stock	40.4	19.6	31.6	92.5	124.7	88.6	116.5	123.6	100.7	29.5
<b>Growth</b>										
Mean TL at Age-1 (mm)	165	143	--	--	184	195	--	--	--	--
Mean TL at Age-3 (mm)	339	--	--	--	--	328	--	--	--	--
<b>Relative Weight</b>										
Stock	93	95	99	98	95	100	117	97	106	85
Quality	101	92	92	99	91	95	103	91	94	86
Preferred	99	90	102	98	87	93	94	89	81	85
Memorable	--	--	--	--	--	97	24	94	94	84
Trophy						--		--	--	--
<b>Mortality</b>										
Total Mortality	55% r2=86	--	--	--	--	43% r2=77	--	--	--	--
<b>Fishing Success</b>										
Catch Rate	0.82	1.08	0.78	0.98	NA	NA	NA	1.71	1.2	0.97
Harvest Rate	0.16	0.14	0.1	0.08	NA	NA	NA	0.07	0.1	0.08
% Released	87	92	92	98	NA	NA	NA	94	89	89.7
Mean Weight	2.88	2.74	2.92	2.04	NA	NA	NA	2.37	2.48	2.71

## **FISHERY FORECAST**

The forecast for largemouth bass fishing on Pickwick Reservoir was good with moderate to good year classes produced in sixteen of the last seventeen years. Recruitment to stock sizes has been good in the last eight years and recruitment to larger sizes has improved with RSD15 values improving after declining below acceptable levels in 2005. Recruitment to the fall appeared moderate and adult size fish recruited well. The CPUE of largemouth bass in the Spring declined slightly and the catch rate of substock fish declined below the 10 year average for the fifth straight year. The CPUE of age 0 largemouth bass in the fall was moderate and  $W_r$  values were below acceptable levels.

Historical data has shown catch and harvest rates were comparable to other west Tennessee reservoirs. In 2015, largemouth bass comprised 61% of the fish caught by anglers (53% in 2014; 45% in 2013; 38% in 2009; 37% in 2008; 40% in 2007; 30% in 2006; 63% in 2005; 51% in 2004; 28% in 2003) and fishing pressure was comparable to historic data. Catch rates exceeded historical.

In 2009, Bass tournament information (BITE) revealed Pickwick Reservoir ranked first in the state in the number of tournaments reported (50). However, no tournaments were reported as being held on Pickwick Reservoir (Tennessee) in 2010 - 2015.

Anglers spent \$6.74 per hour fishing for black bass and were willing to expend an additional 65% to participate in black bass fishing at Pickwick Reservoir. The total value of the largemouth bass fishery was \$796,180.

## **MANAGEMENT RECOMMENDATIONS**

Continue with the 15-inch minimum size limit for largemouth bass (implemented in 2004).

## Smallmouth Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Spring Electro Hours</b>	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>Fall Electro Hours</b>	1.73	2.88	2.05	1.51	0.73	1.17	0.88	1.69	2.53	2.62
<b>Recruitment</b>										
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE	4	5.3	2.4	2.7	2.7	6	10	4	8	1.34
<b>Spring Density (n)</b>	10	23	24	14	26	44	37	18	57	17
PSD	25	33	47	60	86	69	55	67	69	75
RSD Preferred	0	13	24	40	64	26	18	42	18	50
CPUE	6.7	15.3	16	9.3	8.7	29.3	24.7	12	38	11.3
CPUE $\geq$ Stock	2.7	10	12.7	6.7	14.7	23.3	14.7	8	30	8
CPUE $\geq$ Preferred	0	1.3	3.2	2.7	9.3	6	2.7	3.3	5.3	4
CPUE $\geq$ MSL (15" 2001-2007, 2013; 2008-2012 18";)	0	1.3	0.0	1.3	0.7	2	0	3.3	5.3	4
<b>Fall Density (n)</b>	13	29	20	3	10	13	8	13	16	28
Fall Total CPUE	8.5	11.3	6	1.9	14.6	10.7	7.9	6.7	6.6	9.8
Fall CPUE Substock	5.9	1.2	2	1.5	5.8	4.7	4.9	2.4	0.9	1.3
Fall CPUE $\geq$ Stock	2.4	10.1	4	0.4	8.8	6	3	4.3	5.7	8.5
Fall CPUE $\geq$ Preferred	--	--	0.7	0.4	0	0	0	1	2.7	2.1
<b>Growth</b>										
Mean TL at Age-1	--	--	--	--	--	--	--	--	--	--
Mean TL at Age-3	--	--	--	--	--	--	--	--	--	--
<b>Relative Weight</b>										
Stock	--	--	--	--	--	89	96	95	83	83
Quality	91	89	88	--	100	88	--	79	81	86
Preferred	72	85	84	--	79	--	--	79	78	73
Memorable	--	70	--	--	--	--	--	--	78	87
Trophy	--	--	--	--	--	--	--	--	--	--
<b>Fishing Success</b>										
Hours/Acre	0.48	0.1	--	--	NA	NA	NA	NA	0.04	--
Catch Rate	0.14	0.63	--	--	NA	NA	NA	0.21	0.25	--
Harvest Rate	0	0	--	--	NA	NA	NA	0	0	--
% Released	93	99	--	--	NA	NA	NA	99	90	93.3
Mean Weight	4.63	6.9	--	--	NA	NA	NA	1.03	2.97	2.3

## FISHERY FORECAST

Smallmouth bass have historically produced good year classes. The success of smallmouth bass recruiting to larger sizes was unknown due to the difficulty in obtaining adequate samples. However, anglers reported catches of memorable size fish. In 2007 and 2008, recruitment appeared to decline and was below the 10 year average. Spring catch rates have exceeded historic levels in two of the last four years. Recruitment to the Fall appeared satisfactory but Fall night electrofishing was discontinued due to low numbers collected. Length distributions also remained unchanged.

No anglers were interviewed seeking smallmouth bass in 2008, 2009, or 2013. In 2013, relative catch and harvest rates were poor.



## MANAGEMENT RECOMMENDATIONS

In 2012, Alabama approved a 15-inch minimum size limit for smallmouth bass (implemented in 2013) and will conduct sampling to determine the status of their largemouth bass population in 2013. Mississippi implemented a 15-inch minimum size limit for both largemouth bass and smallmouth bass in 2013.

Based on the decisions made by Mississippi and Alabama, recommendations were made to leave the largemouth bass size limit at 15-inches. The smallmouth bass size limit was lowered from 18-inches to 15-inches in March 2013 to establish similar regulations between the three states.

## Spotted Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Spring electro Hours</b>	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>Fall Electro Hours</b>	1.73	2.88	2.05	1.51	0.73	1.17	0.88	1.69	2.53	2.6
<b>Recruitment</b>										
Age-1 CPUE								--	--	--
Substock CPUE	0.7	0	0	0.7	3.3	0.7	0.7	--	0	0
<b>Spring Density (n)</b>	13	15	17	12	15	6	9	1	7	3
PSD	25	93	71	91	67	100	88	--	--	100
RSD Preferred	0	13	0	18	13	40	25	--	--	100
CPUE	8.7	10	11.3	8	14.5	4	6	--	4.7	2
CPUE ≥ Stock	8	10	11.3	7.3	14.5	3.3	5.3	--	4.7	2
<b>Fall Density (n)</b>	29	2	0	0	4	2	1	--	1	0
Fall Total CPUE	11.3	0.4	1.2	--	5.1	--	--	--	0.3	0
Fall CPUE Substock	7.3	0.2	0	--	3.3	--	--	--	0	0
Fall CPUE ≥ Stock	4	0.2	1.2	--	1.8	--	--	--	0.3	0
Fall CPUE ≥ Preferred	0	0.2	0	--	0	--	--	--	0.3	0
Stock	95	95	--	--	--	--	--	--	--	--
Quality	94	89	--	--	--	--	--	--	--	--
Preferred	--	94	--	--	--	--	--	--	--	--
Memorable	--	--	--	--	--	--	--	--	--	--
Trophy	--	--	-	--	--	--	--	--	--	--

## White Crappie

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment (Trap Net Survey)</b>										
Age-0 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE		No	trap	net	after	2002				
Net nights										--
Density (n)										--
<b>Fall Density (Electrofishing Survey)</b>										
PSD	--	--	--	--	--	--	--	--	--	--
RSD Preferred	--	--	--	--	--	--	--	--	--	--
CPUE	--	--	--	--	--	--	--	--	--	--
CPUE ≥ Stock	--	--	--	--	--	--	--	--	--	--
CPUE ≥ MSL (9")	--	--	--	--	--	--	--	--	--	--
Density (n)	2	3		--	--	--	--	--	--	--
<b>Relative Weight (Fall)</b>										
Stock	--	--	--	--	--	--	--	--	--	--
Quality	--	--	--	--	--	--	--	--	--	--
Preferred	--	--	--	--	--	--	--	--	--	--
Memorable	--	--	--	--	--	--	--	--	--	--
Trophy	--	--	--	--	--	--	--	--	--	--
<b>Angling Pressure (Angler Hours per Acre)</b>										
All Crappie Fishing Success	1.09	2	0.2	1.3	NA	NA	NA	0.7	1.7	0.6
Crappie Catch Rate	0.44	0.93	1.78	0.88	NA	NA	NA	1.54	0.48	0.75
Crappie Harvest Rate	0.43	0.8	1.53	0.67	NA	NA	NA	1	0.44	0.68
WC % Released	2	8	26	55	NA	NA	NA	52	14	13
WC Mean Weight	0.78	0.64	0.66	0.64	NA	NA	NA	1.03	1.1	1.1
<b>Value of Fishery (Trip Expenditures in Thousands)</b>										
All Crappie	4.3	12.5	12.1	1.05	NA	NA	NA	67.4	69.4	30

## Black Crappie

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (Trap Net Survey)										
Age-0 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE					No.	trap	netting	after	2002	
<b>Density</b> (Electrofishing Survey) Inadequate sample size										
PSD										
RSD Preferred										
CPUE										
CPUE ≥ Stock										
CPUE ≥ MSL (9")										
<b>Growth</b> Inadequate Sample Size										
Mean TL at Age-1										
Mean TL at Age-3										
<b>Relative Weight</b> Inadequate Sample Size										
Stock										
Quality										
Preferred										
Memorable										

## FISHERY FORECAST

Crappie were not collected at sufficient densities to evaluate the crappie fishery. Creel survey data collected in 2015 showed only 3% of the effort was for crappie and only 70 crappie were recorded during the creel survey. Apparently the crappie fishery in Tennessee was limited. Anglers seeking crappie spent \$4.28 per hour seeking crappie and were willing to spend an additional 83% to fish for crappie on Pickwick Reservoir. However, these data represented only 24 interviews.

## MANAGEMENT RECOMMENDATIONS

Continue with the 9-inch minimum size limit and 30 fish creel limit.

## Redear Sunfish

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE	--	--	--	--	--	--	--	--	--	--
Total CPUE			No	trap	netting	after	2002	--	--	--
Net Nights	--	--	--	--	--	--	--	--	--	--
n	--	--	--	--	--	--	--	--	--	--
<b>Spring Density (Electro Survey)</b>										
PSD	68	78	92	61	69	85	50	100	75	50
RSD Preferred	40	39	76	31	35	21	8	88	44	50
CPUE	16.7	12	30.4	58	17.3	22.7	8	17.3	10.7	6
Substock CPUE	0	0	0.8	18.7	0	0	0	0	0	0.67
CPUE ≥ Stock	16.7	12	29.6	39.3	17.3	22.7	8	17.3	10.7	5.3
CPUE ≥ Preferred	6.7	4.7	21.3	12	6	4.7	4	15.3	4.7	2.67
n	25	18	38	87	26	34	12	26	16	6
Spring Hours	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>Angling Pressure (Angler Hours per Acre)</b>										
Sunfish	--	0.15	0.6		NA	-NA	NA	0.7	0.7	0.3
<b>Fishing Success</b>										
Relative Catch Rate	--	--	--	--	NA	NA	NA	0.02	0.31	0.1
Relative Harvest	--	--	--	--	NA	NA	NA	0.01	0.28	0.1
Redear Mean Weight	0.65	0.65	--	--	NA	NA	NA	0.38	0.6	0.42
Redear %Released	0	0	--	--	NA	NA	NA	56	6	18
<b>Value of Fishery (Trip Expenditures in Thousands)</b>										
Sunfish	1.8	1.7	2.3	2.6	NA	NA	NA	13.2	27.4	13.9

## FISHERY FORECAST

Although densities were low, the redear sunfish collected were of quality size. However, water temperatures during Spring collections reduced sampling efficiency.

## MANAGEMENT RECOMMENDATIONS

A 20 fish creel limit was implemented for redear sunfish in 2008.

## Bluegill

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE	--	--	--	--	--	--	--	--	--	--
Total CPUE	--	--	--	--	No	trap	netting	after	2002	--
Net Nights	--	--	--	--	--	--	--	--	--	--
n	--	--	--	--	--	--	--	--	--	--
<b>Spring Density (Electrofishing Survey)</b>										
PSD	34	51	47	42	20	50	51	58	53	79
RSD Preferred	1	1	5	5	1	3	6	1	1	10
CPUE	76.7	97.3	150.0	157.3	85.3	174.7	168	148.7	58.7	127.3
Substock CPUE	3.3	8	33.3	14	28.7	23.3	13.3	2	0.7	2.67
CPUE ≥ Stock	73.4	89.3	116.7	143.3	56.7	151.3	154.7	146.7	58	124.67
CPUE ≥ Preferred	0.7	0.7	6	7.3	0.7	4.7	9.3	2	0.7	12.67
n	115	146	161	236	128	262	252	223	88	191
Spring Hours	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>Angling Pressure (Angler Hours per Acre)</b>										
Sunfish	0.43	0.25	0.6	0.8	NA	NA	NA	0.7	0.7	0.3
<b>Fishing Success (Bluegill only)</b>										
Relative Catch Rate	2.98	1.81	3.08	6.42	NA	NA	NA	4.75	4.15	2.67
Relative Harvest	0	0	0.0	1.02	NA	NA	NA	3.04	1.81	0.98
Bluegill Mean Weight	0.26	0.25	--	0.25	NA	NA	NA	0.35	0.33	0.34
Bluegill % Released	92	70	84	90	NA	NA	NA	42	51	72
<b>Value of Fishery (Trip Expenditures in Thousands)</b>										
Sunfish	1.8	1.7	2.3	2.6	NA	NA	NA	13.2	27.4	13.9

## FISHERY FORECAST

The bluegill population was typical of populations seen in other west Tennessee reservoirs. Bluegill were abundant, but few preferred size individuals were collected during sampling. However, water temperatures during Spring collections reduced sampling efficiency.

## MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

## Gizzard Shad

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
CPUE < 150 mm	20.2	4.8	35.2	31.8	21.1	23.9	81.8	21.9	60	53.2
CPUE ≥ 280 mm	13.2	52.7	34.3	23.8	25.1	44.4	15.8	26.2	6.3	29.3
<b>Fall Density</b>										
Fall total CPUE	101.6	112.9	122.4	110.7	67.2	183.7	192.7	117.8	127	60.9
Fall CPUE Substock (≤180 mm)	42.1	4.8	35.2	44.2	21.1	23.5	135.9	20.8	63.8	7.7
Fall CPUE ≥ Stock (≥181 mm)	59.4	108.1	87.2	66.5	46.1	160.3	56.8	97	63.2	53.2
Fall total collected	172	291	208	201	60	217	116	212	304	161
Fall Electro Hours	1.73	2.88	2.05	1.51	0.73	1.17	0.88	1.69	2.53	2.6

## Threadfin Shad

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Fall Density</b>										
Fall percent ≤ 75 mm	30	27	100	89	64	98	99	100	100	79
Fall Total CPUE	208.7	76.6	149.4	145.3	15.5	187.8	502.6	205.3	63.6	39.9
Fall Total collected	361	234	309	250	14	214	439	287	161	118
Fall Electro Hours	1.73	2.88	2.05	1.51	0.73	1.17	0.88	1.69	2.53	2.6

## FISHERY FORECAST

The majority of the gizzard shad collected were less than 150 mm and CPUE exceeded historic levels. As seen in other reservoirs the threadfin shad recovered over declines in 2010 and CPUE increased over historic levels. Thousands of threadfin shad were seen but not collected. Preferred sizes were abundant for predators.

Since Asian carp have been reported by commercial fishers on Pickwick Reservoir, Wr's were calculated for gizzard shad (≥ stock = 89; Stock-quality= 89) and trend data will be monitored.

## MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

**Other Species Collected**

<b><u>Number Species</u></b>	<b><u>Gear</u></b>	<b><u>Collected</u></b>	<b><u>Value</u></b>
Black Crappie	Spring Electro	2	1.3
	Fall Electro	5	2.9
Spotted Bass	Spring electro	3	2.0
	Fall Electro	0	0.0
Sauger	Fall Electro	1	0.6
Yellow Perch	Spring Electro	0	0.0
	Fall electro	4	1.5

Value:

Electrofishing – number per hour

**2015 Water Quality Monitoring**

Dissolved oxygen levels fluctuated each month but remained above 4.0 ppm at 30' in June (72'depth), 36' in July, and 72' in August. Secchi disc readings averaged 142 cm (range 126 – 170) and conductivity averaged 119 umhos/cm and ranged from 93 (July) to 146 (August); pH levels fell within acceptable ranges (8.3-, 8.5-, and 7.9 in June, July, and August, respectively). Alkalinity averaged 57.5 mg/l during June through August. Measured levels were similar to historic records.

Water levels fluctuated between January and June, with levels exceeding summer pool from mid-April to May and in July. Additional rainfall in December also resulted in higher than normal water levels. Discharge levels exceeded the 100,000 cfs in January, March, April, and late December.

**Sampling Station**

TRM 207.8

## Reelfoot Lake - 2015

### Description

**Area (acres):** 10,427      **Mean Depth (feet):** 5.2      **Shoreline (miles):**  
**Counties:** Lake, Obion      **Lake Length:** 12 miles      **Drainage area:** 240 sq. miles  
**Total Fishing Effort (angler hours):** 346,150      **Total Value by Anglers:** \$1,711,670  
**Summer Pool:** 282.2    **Winter Pool:** 283.3    **Formed in 1811-1812 by earthquake**

### Management Strategies:

**LMB:** 15" MLL, 3 fish – 1992

15" MLL, 5 fish – 1996

**Crappie:** 30 fish creel limit – 2002

Commercial Crappie Season Closed - 2001

### Habitat Enhancement and Monitoring - 2015

Deep water fish attractors - 0

Shallow water fish attractors - 0

### Angling Pressure (Angler Hours per Acre)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Total Angler Pressure	47	43.7	49.9	41.2	35.2	33.2	32.9	36.8	22.6	24.9	38
All Black Bass	5	3.6	4.1	4.2	2.4	3.3	2.9	3.4	2	2.4	3.4
Tournaments <sup>BITE</sup>	0	0	0	0	0	0	0				
Lbs/Angler Day <sup>BITE</sup>	--	--	--	--	--	--	--				5.65
Fish/Angler Day <sup>BITE</sup>	--	--	--	--	--		--				2.2
Angler Hours <sup>CREEL</sup>							--				
Catch Rate <sup>CREEL</sup>							--				

### Value of Fishery (Trip Expenditures in Thousands)

Black Bass	89	71	124	133	56	88.7	87.9	88.4	83.9	92.9	91.3
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## Largemouth Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Spring Electro hours</b>	3.75	3.75	3.5	3.75	3.75	3.75	3.75	3.75	3.75	3.75	<b>3.75</b>
<b>Fall Electro hours</b>	1.5	1.9	NS	2.52	NS	2.86	NS	3.9	4.31	2.56	<b>1.91</b>
<b>Recruitment</b>											
Age-1 CPUE	--	--	6.8	--	14.9		10.7	--	--	--	<b>6.5</b>
Substock CPUE	1.9	1.6	4	5.6	15.2	0	9.1	0.8	15.7	2.1	<b>5.7</b>
<b>Spring Density (n)</b>	76	92	85	61	121	86	131	45	144	109	<b>101</b>
PSD	83	92	77	90	70	79	89	71	79	59	<b>76</b>
RSD Preferred	52	57	54	58	38	42	44	95	51	36	<b>42</b>
CPUE	20.3	24.5	24.3	16.3	32.3	22.9	34.9	12	38.4	29.1	<b>27.4</b>
CPUE $\geq$ Stock	18.4	22.7	20.3	11.7	17.1	22.9	25.9	11.2	22.7	26.9	<b>21.8</b>
CPUE $\geq$ MSL (15")	9.1	13.1	10.9	6.2	6.4	8.8	11.5	8	11.4	16	<b>8.6</b>
CPUE/seine haul	9.4	2.2	10.6	5.1	3.1	2.9	0.8	5.9	2.9	9.6	<b>7</b>
<b>Fall Density (n)</b>	98	60	NS	65	NS	77	NS	145	217	104	<b>89</b>
Fall Total CPUE	65.3	34.3	NS	29.7	NS	29.3	NS	35.9	47.6	43.7	<b>43</b>
Fall CPUE Substock	4	1.4	NS	4.9	NS	3.7	NS	19.3	5.4	14.6	<b>2.5</b>
Fall CPUE>Stock	61.3	32.9	NS	24.8	NS	25.6	NS	16.6	42.2	21.2	<b>34</b>
<b>Growth</b>											
Mean TL at Age-1 (mm)	--	213	--	--	148	--	170	--	--	--	<b>164</b>
Mean TL at Age-3 (mm)	--	382		--	--	--	363	--	--	--	<b>367</b>
<b>Mortality</b>											
Total Mortality	--	26% r <sup>2</sup> =88		--	--	--	32% r <sup>2</sup> =0.77	--	--	--	
<b>Relative Weight (Fall)</b>											
Stock	113	111	NS	107	NS	107	NS	114	111	111	<b>109</b>
Quality	108	107	NS	112	NS	100	NS	104	103	101	<b>106</b>
Preferred	103	100	NS	103	NS	102	NS	107	118	98	<b>103</b>
Memorable	121	--	NS	96	NS	--	NS	80	98	88	<b>101</b>
Trophy		--	NS	--	NS	--	NS	--		--	
<b>Fishing Success</b>											
Catch Rate	0.63	0.61	0.73	0.48	0.69	0.58	0.45	0.42	0.53	0.51	<b>0.64</b>
Harvest Rate	0.02	0.03	0.02	0.05	0.01	0	0.01	0.01	0	0.01	<b>0.03</b>
% Released	96	95	98	92	99	99	97	98	100	97	<b>97</b>
Mean Weight	2.35	3.18	3.29	2.89	5.35	2.98	2.53	3.87	--	3.53	<b>2.9</b>
NS – NO SAMPLE											

## FISHERY FORECAST:

The largemouth bass fishery remains an under-utilized resource at Reelfoot Lake and may partially explain why this fishery remains of such high quality. CPUE during Spring electrofishing surveys has been < 30 fish/hour in eight of the last thirteen years and this is attributed to poor recruitment in seven of the last thirteen years (good recruitment:  $\geq 5.0$  YOY LMB/hour). However, sampling conditions in 2008 – 2011 may partially explain reduced catch rates during that period (low water levels associated with drought conditions and construction of a new spillway). In 2013, Spring weather patterns impacted sampling (cooler than normal air temperatures). However, recruitment was excellent in 2014 and electrofishing catch rates exceeded the 10-year average. Although catch rates have generally declined, PSD and RSD15 remained above acceptable levels. As with other reservoirs in west Tennessee, recruitment of largemouth bass fluctuated in the 1990's, although densities of fish  $\geq 15$ -inches remained comparable to historic levels. However, the low recruitment of largemouth bass may not be as critical on Reelfoot Lake since fishing pressure was low and over 90% of the fish caught were released.

The length frequency showed good distribution of quality size and larger size classes but few Age 1 fish collected. Relative stock indices continued to exceed the acceptable range which was indicative of a population with a high percentage of preferred and larger size fish. RSD15 has exceeded the acceptable RSD range since 2005 which was indicative of a population with low stock size fish and high numbers of preferred fish. Spring water temperatures (cooler than preferred) contributed to poor samples in 2005, 2006, 2013, 2015), and catch rates were indicative of a population with poor recruitment. Although the Spring CPUE of YOY improved in 2010 (highest since 1997), no substock bass were collected in Spring 2011. One note, 2008, 2010, and 2011 water levels were the lowest seen during the summer and fall due to severe drought conditions and construction of a new dam and spillway. This factor may have negatively impacted YOY survival and recruitment to larger sizes.

Spring CPUE was good. Spring CPUE of preferred sizes exceeded the 10-year average during three of the last four years, and CPUE of stock size fish improved. Due to the low sample size and unfavorable conditions, a crappie targeting survey was also conducted but largemouth bass were also collected. LMB collected during those samples showed increased recruitment (3.5/hour < 205 mm) and comparable total catch rates (29.8/hour) and preferred size catch rates. Fall catch rates of age 0 LMB increased and stock size fish declined slightly.

Electrofishing catch rates were comparable in all four basins (Lower – 30.0; Middle – 27.0; Buck – 26.7; Upper – 32.0/hour). Historically, Buck Basin has appeared to have the highest quality bass population when compared to the three other basins.

Although angler catch rates have declined, angler catch rates have remained acceptable; angler pressure has declined below the ten year average the last eight years. Since 1997, anglers have harvested less than 10% of the fish caught (prior to 1997, anglers harvested more than 20% of the fish caught).

Anglers spent \$2.49 per hour fishing for largemouth bass and were willing to spend an additional 47% seeking largemouth bass on Reelfoot Lake. The estimated total value of the largemouth bass fishery at Reelfoot Lake was \$92,870.

## **MANAGEMENT RECOMMENDATIONS**

Continue with the 15-inch minimum size limit with a five fish per day creel limit.

## White Crappie

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment (Trap Net Survey)</b>											
Age-0 CPUE	--	--	--	3.6		1.9	NS	--	--	--	<b>3.42</b>
Substock CPUE	8.1	6.7	NS	3.8	NS	1.5	NS	32.6	21.1	4.6	<b>5.2</b>
Total CPUE	9.2	11	NS	7	NS	3.6	NS	32.7	24	10	<b>11.4</b>
Net Nights	38	39	NS	40	NS	30*	NS	40	40	40	<b>45.3</b>
n	351	427	NS	289	NS	108	NS	1,308	961	329	<b>587</b>
<b>Spring Density (Electrofishing Survey)</b>											
PSD	92	72	95	82	93	95	89	99	100	74T	<b>71</b>
RSD P	86	34	75	26	76	54	71	84	98	59T	<b>51</b>
CPUE	15.7	22.9	23.1	35.5	14.4	33.1	15.2	36.5	28	6.5T	<b>22.1</b>
CPUE ≥ Stock	15.7	22.5	17.4	27.5	14.4	33.1	14.9	36.5	26.4	6.1T	<b>19.6</b>
CPUE ≥ P	6.7	12.3	17.4	17.7	10.9	17.3	10.7	30.7	25.9	3.8T	<b>10.7</b>
n	62	427	81	61	54	124	57	137	105	35	<b>135</b>
Spring Hrs	3.75	--	3.5	2.0(T)	3.75	3.75	3.75	3.75	3.75	6.13T	<b>3.6</b>
T=Targeted											
<b>Growth</b>											
Mean TL at Age-0 Fall	--	--	--	85	--	77	--	--	--	--	<b>97</b>
Mean TL at Age-2 Fall	--	--	--	226	--	236	--	--	--	--	<b>243</b>
<b>Mortality</b>											
Total Mortality	--	--	--	85% r <sup>2</sup> =69	--	43% r <sup>2</sup> =72	--	--	--	--	
<b>Relative Weight (Fall)</b>											
Stock	97	101	NS	111	NS	84	NS	--	99	109	<b>100</b>
Quality	101	103	NS	109	NS	91	NS	--	96	98	<b>109</b>
Preferred	116	117	NS	115	NS	111	NS	--	--	117	<b>115</b>
Memorable	113	113	NS	107	NS	101	NS	--	--	105	<b>107</b>
Trophy			NS	--	NS		NS	--	--	--	
<b>Angling Pressure (Angler Hours per Acre)</b>											
All Crappie	28.4	26.8	32.6	25.9	20.6	20.5	17.8	23.2	12.8	11.6	<b>25.3</b>
<b>Fishing Success</b>											
Crappie Catch Rate	2.3	2.08	1.91	1.49	1.79	1.63	1.08	1.13	0.57	0.87	<b>1.6</b>
Crappie Harvest	1.58	1.37	1.36	1.05	1.01	1.15	0.71	0.88	0.52	0.45	<b>1.1</b>
WC % Released	32	36	30	32	46	33	37	24	11	63	<b>31</b>
WC Mean Weight	0.64	0.68	0.68	0.7	0.7	0.68	0.78	0.72	0.94	1	<b>0.72</b>
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
All Crappie	1,142	1,118	1,688	1,544	996	1,122.80	983.3	1,375.30	770.2	818.8	<b>1,204</b>

NS – NO SAMPLE

## Black Crappie

	2006	2007	2008	2009	2010	2011*	2012	2013	2014	2015	Mean
<b>Recruitment (Trap Net Survey - Fall)</b>											
Age-0 CPUE	--	--	--	1	NS	3.8	NS	--	--	--	1.1
Substock CPUE	2.6	1.2	--	1.5	NS	2.8	NS	6.9	3.2	0.7	1.4
Total CPUE	3.9	5.4	--	2.7	NS	5.2	NS	8.6	5.2	2.2	3.5
Net Nights	38	39	--	40	NS	30*	NS	40	40	40	45
n	148	213	--	109	NS	157	NS	342	209	88	165
<b>Density (Spring Electrofishing Survey)</b>											
PSD	78	72	94	11	28	70	84	76	100	54T	48
RSD Preferred	44	33	61	6	11	21	33	57	80	48T	8
CPUE	12.9	6.1	5.1	82.2	15.7	9.9	14.9	5.9	2.9	10.5T	27.3
CPUE ≥ Stock	12.8	4	5.1	56.7	14.1	9.9	13.6	5.6	2.7	9.8T	23.1
CPUE Preferred	4.3	2.2	--	6.2	1.6	2.1	4.5	3.2	2.1	4.6T	3.7
n	19	19	18	92	59	37	56	22	11	90T	87
Spring Hours	3.75	3.75	3.5	2.0(T)	3.75	3.75	3.75	3.75	3.75	6.13T	3.65
% Black crappie	23	4	18	60	52	23	50	14	9	72T	37
T=Targeted											
<b>Growth (Fall)</b>											
Mean TL at Age-0 Fall	--	--	--	91	--	82	--	--	--	--	100
Mean TL at Age-2 Fall	--	--	--	167	--	218	--	--	--	--	199
<b>Mortality</b>											
Total Mortality	--	--	--	85% r2=87	--	42% r2=65	--	--	--	--	--
<b>Relative Weight (Fall)</b>											
Stock	96	97	NS	96	NS	123	NS	106	110	111	104
Quality	106	107	NS	113	NS	104	NS	118	112	111	104
Preferred	101	107	NS	114	NS	106	NS	100	101	102	103
Memorable	98	105	NS	99	NS	97	NS	100	98	101	99

**NOTE:** In 2009, mean total length at age 2 estimated from early Spring electrofishing. NS – NO SAMPLE

\* 2011 - Only Lower Blue Basin and Upper Blue Basin were sampled with trap nets due to very low water levels in the Fall.

## FISHERY FORECAST

Spring electrofishing catch rates were below the 10-year average (standard – 5.1/hr; targeted – 6.5/hr). However, spring electrofishing relative stock indices depict a population of quality individuals (over 50% ≥ 250 mm) and Wr's were within or exceeded the acceptable range. Black crappie CPUE were also low in Spring electrofishing (standard – 10.1/hr; target – 10.5/hr) and fall electrofishing collected 34.6 fish/hour. Nearly 40% of the black crappie collected in the fall were ≥ 250 mm.

The CPUE during trap net showed YOY catch rates were similar between basins (Lower – 0.8/NN; Middle – 4.1/NN; Buck – 9.0/NN and Upper Blue – 4.4/NN).. Although the majority of crappie fishing is in the Lower Basin, Lower Blue Basin has historically had the lowest trap net catch rates. Although black crappie abundance declined in 2013 and 2014, densities increased in 2015 and percent abundance of black crappie during electrofishing surveys has remained around 50% during the three of the last six years. The density of black crappie will continue to be monitored. The crappie fishery appears to be on the decline. Although trap netting surveys were not conducted during 2010-2012 (very low water levels), the crappie fishery probably experienced very low recruitment of crappie during those years since crappie do not respond well to drought conditions (drought periods in 2010, 2011). However, recruitment rates have improved the last three years.

Fishing pressure for crappie has decreased below the 10 year average the last six years although crappie have remained the most sought species. The catch rate for crappie declined from 1979 to 2001, when fishing pressure increased. Although anglers harvest nearly one crappie per hour, harvest rates have generally declined since 2006. The total number of fish harvested per acre (25.3/acre in 2001; 46/acre in 2002; 72.7/acre in 2003; 102/acre in 2004; 87/acre in 2005; 68/acre in 2006; 55.9/acre in 2007; 50.4/acre in 2008; 42.5/acre in 2009; 22.3/acre in 2010; 22.2/acre in 2011; 12.6/acre in 2012; 20.4 in 2013; 7.1 in 2014; 5.0 in 2015) has decreased since 2005 and may be attributed to fishing conditions during March and April (fluctuating water levels and unstable weather patterns), gasoline prices, low recruitment levels, and the decline in fishing pressure. During 2013, water temperatures did not warm to normal spring water temps until early May and this late warm-up negatively impacted crappie harvest; in 2014, similar spring conditions existed and the lake froze for 3-4 weeks in March. As previously mentioned, low recruitment levels are suspected for 2010-2012 since very low water levels and drought periods existed during those years.

The average weight of the crappie harvested at Reelfoot Lake has increased since 1985 and remained high quality; the increased weight of crappie was attributed to the increased density of the silverside population. The CPUE of silverside collected in seine hauls increased but remained below the 10-year average. This decline is a concern since silverside is important forage for crappie. The forecast for the fishery will depend on abundance of silverside, fishing pressure, and the effects of eliminating the commercial crappie fishery (after the 2000 - 2001 season). The TWRA will closely monitor the population.

Anglers spent \$5.32/hour seeking crappie and were willing to spend an additional 27% to fish for crappie at Reelfoot Lake. The total value of the fishery by anglers was \$818,750. The high estimate for anglers seeking crappie was attributed to the fact that 31% of the anglers interviewed traveled over 250 miles to fish at Reelfoot Lake.

## **MANAGEMENT RECOMMENDATIONS**

Continue with the 30 fish creel limit for crappie (implemented in 2002).

## Bluegill

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment (Trap Net Survey - Fall)</b>											
Age-1 CPUE	--	2.4	NS	--	NS	--	7.2 (EL)	--	--		4
Substock CPUE	3.3	1.2	NS	0.2	NS	0.1	NS	1	2.1	0.4	1.4
Total CPUE	5.6	3.7	NS	1.5	NS	0.9	NS	1.2	3.7	0.6	3.1
Net Nights	38	39	NS	40	NS	30*	NS	40	40	40	45
n	211	145	NS	60	NS	28	NS	47	149	24	136
<b>Density (Spring Electrofishing Survey)</b>											
PSD	82	82	59	57	57	68	67	58	38	62	68
RSD Preferred	23	36	34	12	16	15	21	17	7	5	19
CPUE	73.1	72	38.9	80.8	119.2	48.8	73.3	50.4	115.5	73.1	86.2
Substock CPUE	6.9	2.4	4	5.9	43.7	5.6	8.8	13.3	10.1	15.5	16.4
CPUE ≥ Stock	67.2	69.6	35	74.9	75.5	43.2	64.5	37.1	105.3	57.6	69.9
CPUE ≥ Preferred	14.7	25.1	12	9.3	11.7	6.9	13.3	6.4	6.9	2.9	12.3
n	274	270	136	303	447	183	275	189	433	274	318.7
Spring Hours	3.75	3.75	3.5	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
<b>Growth</b>											
Mean TL at Age-1	--	69	--	--	--	--	75	--	--	--	69
Mean TL at Age-3	--	175	--	--	--	--	188	--	--	--	175
<b>Mortality</b>											
Total Mortality	--		--	--	--	--	69% r <sup>2</sup> =0.95	--	--	--	
<b>Angling Pressure (Angler Hours per Acre)</b>											
Sunfish	13	12	11.7	9.2	9.2	6.9	8.6	8.2	5.8	8.1	9.2
<b>Fishing Success</b>											
Sunfish Catch Rate	2.52	2.33	2.5	2.21	2.33	1.79	1.01	2.22	2.53	1.98	2.2
Sunfish Harvest Rate	2.9	1.82	2.05	1.79	1.71	1.44	0.81	1.83	1.88	1.56	1.8
Bgill Mean Weight	0.39	0.43	0.45	0.42	0.43	0.44	0.51	0.51	0.5	0.41	0.4
Bgill % Released	26	26	21	22	31	24	23	17	29	28	27
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
Sunfish	682	648	731	570	500	466.9	552.9	520.5	363.4	582.8	502

### NS – NO SAMPLE

\* Only Lower Blue Basin and Upper Blue Basin were sampled with trap nets due to very low water levels in the Fall.

## FISHERY FORECAST

The bluegill fishery remains one of the best in the state. However, the CPUE of RSDP fish has been below the 10-year average in seven of the last eight years. The apparent declines in density and quality may be attributed to sampling conditions (cooler water temps, drought conditions, and unusually warm water temps). Total CPUE has fluctuated since 2002. Estimated total mortality appeared high (69%) in 2012. However the CPUE of stock size fish increased significantly in 2014 and remained high in 2015.

Although fishing pressure has declined since 2006, pressure increased in 2015 although it remained below historic levels. Catch and harvest rates were comparable to the ten year average. Since historic data has shown that over 52% of the anglers travel more than 100 miles, gasoline prices may contribute to the decline in fishing pressure. Mean weight and RSD8 remained above the 10 year average.

Anglers spent \$5.31/hour seeking bluegill and were willing to spend an additional 31% to fish for bluegill at Reelfoot Lake. The total value of the fishery by anglers was \$582.840. The high value estimate for anglers seeking bluegill was attributed to the fact that 31% of the anglers interviewed traveled over 250 miles to fish.

## MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

**NOTE:** As requested by Mike Hayes, TWRC Commissioner, 115,130 redear sunfish were stocked into Reelfoot Lake in November, 2010 (1,588/pound). These fish were stocked in Lower Blue Basin.

## Channel Catfish

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Angling Pressure</b> (Angler Hours per Acre)											
Catfish	0.22	<0.1	0.65	0.4	0.6	0.6	1.1	0.14	0.05	0.58	<b>0.5</b>
<b>Fishing Success</b>											
Catch Rate	0.22	<0.1	0.65	0.4	0.6	0.6	1.1	0.14	0.7	1.1	<b>0.8</b>
Harvest Rate	0.62	0.83	0.49	1.03	0.24	0.34	0.62	0.55	0.19	0.78	<b>0.6</b>
% Released	0.82	0.98	0.55	1.22	0.4	0.43	1.11	0.79	20	30	<b>25</b>
Mean Weight	0.62	0.83	0.49	1.03	0.24	0.34	0.62	0.55	2.52	1.93	<b>2.6</b>
<b>Value of Fishery (Trip Expenditures in Thousands)</b>											
Catfish	11	4.1	35.5	15.9	25.5	29.8	15.6	0.9	--	28.3	<b>17.3</b>

## Gizzard Shad

Recruitment	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
CPUE < 150 mm	22	253.2	NS	55.6	NS	61.5	NS	43.3	21.1	91.4	61.7
CPUE ≥ 280 mm	0	4.2	NS	1.9	NS	42	NS	0.5	0	0	1.8
<b>Density</b>											
Fall total CPUE	110	350.2	NS	165	NS	114	NS	106.6	70	219	153.7
Fall CPUE Substock	56	314.2	NS	77.3	NS	81.2	NS	71	31.7	119.3	97.6
Fall CPUE ≥ Stock	54	36	NS	87.7	NS	33.8	NS	35.5	38.2	99.7	56.3
Fall total collected (n)	165	571	NS	356	NS	285	NS	317	310	547	301
Fall Electro Hours	1.9	1.9	NS	2.52	NS	2.5	NS	3.9	4.31	2.56	2.23

## Threadfin Shad

Density	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Fall CPUE < 75 mm	0	33.2	NS	0	NS	35.7	NS	1	0	0	12.5
Fall Total CPUE	0	40	NS	0	NS	52.2	NS	1	0	0	15
Fall Total collected (n)	0	571	NS	0	NS	145	NS	4	0	0	130

NS – NO SAMPLE

## Other Prey

Silverside no/seine haul	979	115	158	272.4	37.8	60.7	67.7	176.3	129.8	164.3	250
Bluegill no/seine haul	215	184.9	194.7	1,055	239.9	68.1	206.4	48.2	56.4	559.3	265

## MANAGEMENT RECOMMENDATIONS

Extremely low water levels have compromised fall survey data in the past. Historically gizzard shad and bluegill have provided preferred size prey for predators, with threadfin shad providing good prey densities occasionally. In general, gizzard shad recruitment appeared to decline and recruitment declined below historical levels (significant increases in 2015). Bluegill densities increased in seine surveys and were the highest since 2009. Since Asian carp have been collected during surveys, Wr's were calculated for gizzard shad (2013: ≥ stock = 85; Stock-quality=85; 2014: ≥ stock = 95; Stock-quality=95; 2015 : ≥ stock = 92; Stock-quality=92) and trend data will be monitored.

The average weight of the crappie harvested at Reelfoot Lake has increased since 1985 and remained high quality; the increased weight of crappie was attributed to the increased density of the silverside population. Although catch rates increased in 2013 seine hauls, the CPUE of silverside collected in seine hauls has decreased dramatically and is a concern since silverside is important forage for crappie. However, water levels were very low and may have impacted capture of this species during sampling. The forecast for the white crappie fishery will depend on abundance of silverside, fishing pressure, and the effects of eliminating the commercial crappie fishery (after the 2000 - 2001 season). The TWRA will closely monitor the population.



## Other Species Collected – 2015

<u>Species</u>	<u>Number Collected</u>	<u>Gear</u>	<u>Value</u>
Bluegill	24	Trapnetting	0.6
Bowfin	16	Trapnetting	0.4
Channel Catfish	8	Trapnetting	0.2
Common Carp	4	Trapnetting	0.1
Freshwater Drum	6	Trapnetting	0.2
Gizzard Shad	953	Trapnetting	23.8
Golden Shiner	7	Trapnetting	0.2
Grass pickerel	1		<0.1
Largemouth Bass	152	Targeted Electro	24.6
	1	Trapnetting	<0.1
Longear Sunfish	121	Trapnetting	3.0
Orangespotted Sunfish	2	Trapnetting	<0.1
Smallmouth buffalo	2	Trapnetting	<0.1
Spotted Gar	68	Trapnetting	1.7
Warmouth	7	Trapnetting	0.2
Yellow Bass	22	Trapnetting	0.6
Yellow bullhead	1	Trapnetting	<0.1

## 2015 Water Quality Monitoring (Six sampling stations)

### JUNE

Dissolved oxygen levels were above 4.0 ppm until the bottom (fell below 4.0 ppm at bottom) and secchi disc readings declined and averaged 41.6 cm (2014- 48.8 cm; 2013 - 48.6 cm) at the six sites which was an increase over 2009-2012 levels (14 cm; 2011 34.7 cm; 2012 – 38 cm) In general secchi disc readings were similar in all basins. Water temperatures averaged 29.8°C at 2 feet and water temperatures increased as sampling progressed upstream, as did pH.

### JULY

Dissolved oxygen levels were good at all depths at all stations except Palestine where dissolved oxygen fell below 4.0 ppm at 3'. Water temperatures were exceeded June temperatures (30.5°C at 2'). Secchi disc average 36.7 cm (2014 - 40 cm; 2013 - 42.3 cm; 2012 - 37 cm) and surface pH readings averaged 7.8 (10 - 2014 8.4-2013; 9.2 in 2012) at the six sites. In general pH readings were similar in all basins.

### AUGUST

Dissolved oxygen levels were acceptable at all depths except Brewer's Bar (<4.0 ppm at 2'). Water temperatures averaged cooler than historic data and measured 26.1°C at 2' at the six stations (2014 - 30.1°C; 2013 - 28.1 C) . Secchi disc readings averaged 35.2 cm (2014 - 40 cm 2013 - 44.7 cm; 2012 - 29 cm) and were similar between stations. The surface pH readings averaged 8.5 (2014 - 10.4; 2013 - 8.6; 2012 - 9.8) at the six sites.

### Sampling Stations

Office Station – bottom depth – 10'  
Catfish Channel – bottom depth – 14'  
Joe Basin - bottom depth – 5'

Palestine - bottom depth – 4'  
Brewer's Bar - bottom depth – 3'  
Upper Blue Basin- bottom depth – 6'

**2015 Seine Data**

<b>Species</b>	<b>&lt;1.0</b>	<b>1.0 - 1.9</b>	<b>2.0 - 2.9</b>	<b>3.0 - 3.9</b>	<b>4.0 - 4.9</b>	<b>&gt;5.0</b>	<b>total #</b>	<b>%of total</b>
Inland Silversides	20	885	570	4	0	0	1479	20.94%
Gambusia	9	6	0	0	0	0	15	0.21%
Warmouth Sunfish	0	0	0	1	0	1	2	0.03%
Bluegill Sunfish	760	4211	49	12	1	1	5034	71.26%
Blk. Spt. Topminnow	0	7	1	0	0	0	8	0.11%
White Crappie	0	2	6	0	0	0	8	0.82%
Spotted Sunfish	0	21	33	4	0	0	58	0.82%
Pugnose Minnow	0	29	73	0	0	0	102	1.44%
Largemouth Bass	0	2	49	29	6	0	86	1.22%
Black Crappie	0	0	0	0	0	0	0	0.00%
Yellow Bass	0	0	32	2	8	8	50	0.71%
Golden Shiner	0	0	6	0	1	0	7	0.10%
Channel Catfish	0	1	8	0	0	1	10	0.14%
Org. Spt Sunfish	0	1	10	2	0	0	13	0.18%
Bigmouth Buffalo	0	0	0	0	0	0	0	0.00%
Longear Sunfish	0	41	18	14	8	0	81	1.15%
Gizzard Shad	0	0	5	2	0	1	8	0.11%
Bullhead Minnow	0	19	81	0	0	0	100	1.42%
Johnny darter	0	3	0	0	0	0	3	0.04%
<b>Totals</b>	<b>789</b>	<b>5228</b>	<b>941</b>	<b>70</b>	<b>24</b>	<b>12</b>	<b>7064</b>	

9 sites sampled, starting at 9 PM until 11Pm.

The average water temperature between sites was 34.4 degrees (C)

Water levels summer pool, no rain for past 30 days

Collectors were: 1340, 1343, 1344, 1208, 1350

Water with good bloom, but very warm due to hot days.

## REGION 2

### Cheatham Reservoir

#### Description

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**Area (acres):** 7,450      **Mean Depth (feet):** 18      **Shoreline (miles):** 320  
**Counties:** Davidson. Cheatham and Sumner  
**Full Pool Elevation (feet-msl):** 385      **Winter Pool Elevation (feet-msl):** 384  
**Dam Completion:** 1952

#### Summary:

Annual fish population surveys are used to evaluate and manage Cheatham Reservoir fisheries. Largemouth bass, crappie and catfish are important fisheries. Walleye, sauger and striped bass are stocked annually to enhance and develop the riverine fishery.

Total largemouth bass catch-per-unit effort (CPUE) from electrofishing in 2015 was 97 fish/hour, with 22/hour over 15 inches. CPUE of sub-stock largemouth bass was high (15/hour) indicating a strong year-class. Electrofishing abundance of stock size and greater fish was high (82/hour). High abundance of stock size largemouth bass indicates good future recruitment of catchable size fish. Proportional stock density was in the acceptable range (76 %) and relative stock density (preferred) was 27 % indicating a good proportion of the population over 15 inches. Stock density indices indicate sufficient number and sizes of largemouth bass to maintain quality fishing through 2016 and 2017.

White crappie were the predominate crappie species caught in 2015 trap net samples from Cheatham Reservoir (93% white crappie). Samples revealed a slightly stronger year-class (3.3 age-0/net night) in 2015 over 2014 samples. Overall abundance of white crappie was good with 4.95 fish caught net/night. Recent (2013) age and growth data shows that these fish should reach the minimum length limit by age 3. Abundance of sub-legal (stock size) crappie was also good (1.9/net night). Crappie fishing should continue to be good as the strong 2010 and 2011 year classes move through. The moderately strong 2014 and 2015 year classes should recruit into the fishery in 2016-2018.

Cheatham reservoir received no sauger in 2015 due to lower than expected hatchery production. Gill net sampling could help determine the impact of a missed stocking, if water conditions below old Hickory Dam allow. Evaluating these stockings is necessary, but unfortunately, high spring flows have prevented annual sampling. The riverine nature of Cheatham Reservoir should be ideal habitat for sauger, walleye and striped bass, all require annual stocking.

Walleye (74,690) were stocked in 2015. This stocking at 10/acre is significant and should contribute to the fishery. Anglers have reported regular catches of walleye below Old Hickory Dam in the spring and summer. Experimental gill net sampling is planned in spring 2017 to evaluate this fishery, if water conditions permit.

In 2015, 44,847 (6.0/acre) striped bass were stocked into Cheatham Reservoir. Cheatham Reservoir has great potential for a hatchery brood fish source if stocking numbers are maintained. Currently only one dependable brood source is located within the region. Evaluation of the striped bass fishery is difficult because creel surveys are not conducted on Cheatham Reservoir. Quantitative sampling is also difficult because of the riverine habitat, high flows and the unpredictable movement patterns of striped bass. Regular catches of striped bass are observed below Old Hickory Dam in the spring and are a very important component of this fishery.

Annual habitat work on Cheatham was concentrated on buoyed fish attractor sites. Ten Christmas trees were added to established sites in Sycamore creek, Johnson creek and Rock Harbor cove. Fifteen concrete block-corrugated pipe structures were also added to the buoyed sites. Expansion of the buoyed fish attractor sites is scheduled for 2017.

**Largemouth Bass, Cheatham Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	8	10	12	12	4	18	6	12	5	15
<b>Density</b> (electrofishing)										
PSD	73	71	68	60	60	65	59	75	62	76
RSD (preferred)	24	25	23	20	27	19	23	28	31	27
CPUE (total)	75	100	132	133	116	145	96	106	91	97
CPUE $\geq$ Stock	67	91	120	121	111	127	90	94	86	82
CPUE $\geq$ 15"	16	23	28	24	30	24	21	26	26	22
CPUE $\geq$ 20"	1	2	4	4	2	2	2	1	3	4
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	200	-	
Length Age-3	-	-	-	-	-	-	-	336	-	
<b>Condition</b> (spring electrofishing)										
Stock	93	91	99	93	90	94	88	92	91	96
Quality	93	92	100	98	92	99	94	99	86	105
Preferred	93	94	98	99	97	98	97	103	92	92
Memorable	85	105	102	103	102	103	93	97	97	95
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	0.34	-	

**Spotted Bass, Cheatham Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	0	1	1	1	1	2	1	4	2	1
<b>Density</b> (electrofishing)										
PSD	56	63	76	51	31	58	86	42	43	37
RSD (preferred)	0	8	6	18	8	0	0	4	43	2
CPUE (total)	3	22	17	15	5	10	3	12	10	22
CPUE $\geq$ Stock	3	21	16	14	4	8	2	9	9	20
<b>Condition</b> (spring electrofishing)										
Stock	111	97	127	109	96	103	100	114	91	99
Quality	93	97	115	103	93	107	100	103	92	102
Preferred	-	104	110	105	98	-	-	116	91	97
Memorable	-	111	-	-	-	-	-	-	-	

**White Crappie, Cheatham Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.6	1.5	0.6	0.6	6.0	3.2	0.2	0.8	2.2	3.0
<b>Density</b> (trap netting)										
PSD <sup>a</sup>	91	97	98	95	100	83	76	77	25	64
RSD (preferred) <sup>a</sup>	74	64	92	68	79	70	48	55	23	32
CPUE (total)	1.2	2.7	1.5	1.5	9	6.5	2.9	2.5	3.5	4.95
CPUE $\geq$ Stock	0.6	1.2	0.9	0.9	2.7	3.3	2.7	1.7	1.3	1.9
CPUE $\geq$ MLL (10-inches)	0.3	0.7	0.5	0.6	1	0.7	1.5	1	0.3	0.6
<b>Growth</b> (electrofishing) (white crappie)										
Length Age-1	-	-	-	-	-	-	-	169	-	
Length Age-3	-	-	-	-	-	-	-	283	-	
<b>Condition</b> (trap netting)										
Stock	97	91	87	95	89	87	98	86	91	93
Quality	94	95	98	100	87	88	97	88	93	92
Preferred	93	87	102	99	91	88	99	88	79	91
Memorable	93	-	99	95	89	87	90	78	85	99
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	0.65	-	

<sup>a</sup> Targeted Electrofishing



**Sauger, Cheatham Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (gill netting)										
CPUE (total)	2.6	-	-	-	-	-	-	-	-	-
<b>Growth</b> (gill netting)										
Length Age-1	10.9	-	-	-	-	-	-	-	-	-
Length Age-3	15.1	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	46,316	59,654	37,676	39,382	0	45,872	0	57,141	51,429	-
#/Acre	6.2	8.0	5.1	5.3	0.0	6.2	0.0	7.7	6.9	-

**Walleye, Cheatham Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Stocking</b>										
#	0	28,403	33,984	37,215	0	54,908	15,889	14,807	98,063	74,690
#/Acre	0.0	3.8	4.6	5.0	0.0	7.4	2.1	2.0	13.2	10.0

**Striped Bass, Cheatham Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Stocking</b>										
#	81,831	125,387	78,736	154,914	82,534	75,134	59,376	46,116	15,908	44,847
#/Acre	11.0	16.8	10.6	20.8	11.1	10.1	8.0	6.2	2.1	6.0

## Habitat Enhancement and Water Quality 2015

Type of Work	Details	Quantity	
		New	Renovated
Bouyed fish attractor sites	Sycamore Creek, Johnson Creek, Rock Harbor Cove		15 each site
Bouyed fish attractor sites	Concrete-corrugated Pipe structures		15 each site

### Water Quality Monitoring - 2015

Parameter	Sampling Period	Water Quality
Temperature	July/August	Normal
Dissolved Oxygen	July/August	Normal

## Old Hickory Reservoir

### Description

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**Area (acres):** 22,500      **Mean Depth (feet):** 32      **Shoreline (miles):** 440

**Counties:** Davidson, Sumner, Wilson, Trousdale and Smith

**Full Pool Elevation (feet-msl):** 445      **Winter Pool Elevation (feet-msl):** 444

**Dam Completion:** 1954

### Summary:

Anglers spent a total of 453,649 hours fishing Old Hickory Reservoir in 2015. Bass fishing remains the most popular and accounts for 35% of the total effort. Anglers spent 164,835 hours fishing for bass on Old Hickory in 2015. Of that, 162,008 hours was spent targeting largemouth bass. Tournament bass anglers make-up 22% of the total effort. Creel surveys revealed a targeted catch/rate of 0.87 largemouth bass per hour, up slightly from 2014 (0.7 fish/hour).

Annual electrofishing surveys indicated a high abundance of largemouth bass (143/hour). Abundance of largemouth bass between 12-15 inches was 37 fish/hour, fish over 15 inches was also high (30.1/hour). Spring electrofishing indicated a strong age-0 year class in 2015 (42 sub-stock bass/hour). This follows weak year class in 2014 (6 sub-stock bass/hour). The strong year class in 2013 (23 sub-stock bass/hour) should help bridge the weaker 2014 year class. Proportional stock density (PSD) and catch per unit effort (CPUE) of stock size bass indicates sufficient and consistent recruitment, for the past several years.

Crappie fishing in Old Hickory Reservoir was the second most popular fishery in 2015. Anglers spent 71,428 hours fishing for crappie in Old Hickory in 2015. White crappie are the predominate species of crappie caught in Old Hickory making up 69% of the total angler catch. Trap net catch was similar (81% white crappie). Angler catch rate was high (1.3 crappie/hour) with a mean weight of 0.8 pounds. Fall trap net catch of 2.33 young-of-year/net night indicate a moderate to good 2015 year class. Black crappie made-up 29% of the total crappie catch in 2015 creel surveys.

Old Hickory Reservoir supports a world class striped bass fishery with regular catches of 50 to 60 pound fish. The fishery is difficult to evaluate using standard sampling techniques. However, creel data shows anglers spent 33,010 hours fishing for striped bass in 2015 with a catch rate of 0.20 fish/hour. Fishermen were satisfied with both quality and quantity of the fishery. Good water quality, forage and riverine habitat make Old Hickory Reservoir ideal for striped bass introductions. It is crucial that minimum stocking rates of ten/acre are maintained to ensure the success of this fishery. 2014 and 2015 stockings rates were 8.2 and 9.7 fish/acre.

Sauger fishing on Old Hickory is an important and very popular winter and early spring fishery. Angler effort has steadily declined for over ten years (15,881 angler hours in 2015). Angler catch rate has also declined (0.7 sauger/hour). Stocking efforts seem to have some impact, yet research projects and annual sampling has been inconclusive as to the impact of stocking. Gill netting for sauger is difficult because of unpredictable water conditions. High spring flows sometimes prevent personnel from effectively collecting fish below Cordell Hull Dam, where sauger concentrate prior to spawning. 2015 spring gill netting was conducted and all fish went to hatcheries for brood.

Sauger stocking rates for 2013 and 2014 were 255,144 and 253,226 respectively; this is the highest rates for at least ten years. These rates should help determine if stocking greater numbers can make a substantial impact to the fishery. Stocking rates dropped to only 15,881 in 2015 the lowest since 2009.

Walleye stocking in Old Hickory began in 2004 to enhance this fishery. Stocking rates have varied greatly from 11/acre down to 3, with a mean of 6.3/acre. Evaluating the success of stocking has been difficult with traditional methods. Exploratory gill netting down-stream in the winter yielded no walleye. Annual winter gill netting below Cordell Hull dam has yielded poor catches with the highest catch rate in 2005 with 4.9 fish/hour, this followed a stocking rate over 10/acre in the spring of 2004. 359,832 walleye fingerlings were stocked in the spring of 2015 (16/acre). Gill net sampling will be conducted in the spring to evaluate stocking success and recruitment.

Intended angler catch rate has averaged 0.2 walleye/hour in 2015. Angler attitude has been positive with reports of walleye limits and fish caught exceeding ten pounds. Targeted angler effort for walleye is only slightly less than sauger (15,881 for sauger and 14,296 for walleye), indicating angler acceptance. However, quantitative data has not reflected fisherman reports.

Creel surveys indicate catfishing accounted for 12% of the total effort in Old Hickory Reservoir. Catfish anglers spent \$221,830 fishing in 2015. Channel catfish are most frequently caught comprising 77% of the total catch. Average weight of channel catfish has remained relatively constant for the past ten years (two pounds).

#### Angling Effort and Expenditures, Old Hickory Reservoir

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	849,996	1,013,566	970,509	893,724	670,816	532,271	655,796	523,113	627,743	453,649
Angler Hours Per Acre	37.8	45.0	43.1	39.7	29.8	23.7	29.1	23.2	27.9	20.1
Angler Trips	180,297	218,081	208,509	187,588	149,728	119,981	146,617	117,937	150,607	101,906
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	3,211,190	3,619,210	3,422,680	2,572,030	2,042,080	1,617,950	3,113,860	1,186,540	3,323,000	2,330,590

**Black Bass, Old Hickory Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	357,908	424,425	434,275	358,995	250,259	197,134	261,258	209,533	219,417	164,835
(hrs/acre)	15.9	18.9	19.3	16.0	11.1	8.8	11.6	9.3	9.8	7.3
Any Black Bass (hrs)	0	0		0	0	0	0	362	1,673	283
(hrs/acre)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0
Largemouth Bass (hrs)	354,360	422,354	431,904	352,613	249,440	194,093	258,725	208,213	214,712	162,008
(hrs/acre)	15.7	18.8	19.2	15.7	11.1	8.6	11.5	9	10	7
Smallmouth Bass (hrs)	3,548	2,071	2,371	5,708	819	3,041	2,533	958	2,741	2,261
(hrs/acre)	0.2	0.1	0.1	0.3	0.0	0.1	0.1	0	0	0
Spotted Bass (hrs)	0	0	0	674	0	0	0	0	291	566
(hrs/acre)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0
<b>Tournaments (all black bass)</b>										
# Tournaments (BITE)	4	4	3	0						
Pounds/Angler Day (BITE)	3.6	4.38	4.48	0						
Bass/Angler Day (BITE)	1.96	2.24	1.98	0						
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	2,050,150	2,110,460	1,946,230	1,498,460	814,400	677,200	1,782,490	451,170	606,450	1,630,090
Any Black Bass	0	0	0	0	0	0	0	0	0	0
Largemouth Bass	2,048,480	2,107,680	1,945,350	1,485,560	812,970	676,910	1,771,520	451,170	592,880	1,611,580
Smallmouth Bass	1,670	2,780	880	12,900	1,430	290	10,970	0	13,570	18,240
Spotted Bass	0	0	0	0	0	0	0	0	0	0

**Largemouth Bass, Old Hickory Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	25	10	20	21	8	12	9	20	6	42
<b>Density</b> (electrofishing)										
PSD	64	27	73	58	62	78	67	70	65	67
RSD (preferred)	21	24	15	16	23	24	25	22	20	30
CPUE (total)	140	157	196	181	127	136	105	145	124	143
CPUE $\geq$ Stock	114	147	177	160	119	124	96	125	118	101
CPUE $\geq$ 15	24	36	27	27	27	29	24	27	24	30
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	5.4	-	-	-
Length Age-3	-	-	-	-	-	-	12.9	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	101	94	97	94	87	97	88	95	95	100
Quality	100	94	101	100	92	102	90	98	90	101
Preferred	100	94	99	103	95	106	97	100	95	97
Memorable	107	95	100	108	99	101	100	103	100	102
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.8	0.9	1.2	1	0.8	0.9	0.72	0.78	0.71	0.87
Harvest Rate (intended)	0.1	0.1	0.1	0.1	0.07	0.07	0.08	0.08	0.07	0.09
% Released	90.8	91.5	95.3	92.3	87.4	90.2	85.9	90.1	89.3	86.1
Mean Weight	2.1	1.9	2	1.8	2	1.91	1.91	2.35	2.25	1.98

**White Crappie, Old Hickory Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.5	2.6	0.9	2.6	3.3	1.4	0.8	1.8	1.3	2.33
<b>Density</b> (trap netting (t) /electrofishing (e))										
PSD (e)	97	100	94	99	98	97	98	97	99	100
RSD (preferred) (e)	77	65	82	68	60	54	85	77	78	83
CPUE (total) (t)	1.3	3.5	2.5	3.6	5.1	3.3	2.7	2.7	1.8	2.95
CPUE ≥ Stock (t)	0.8	0.8	1.6	1	1.9	1.9	1.9	1	0.6	1.15
CPUE ≥ MLL (10-inches) (t)	5	0.2	0.8	0.4	0.6	0.5	1	0.7	0.4	0.53
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	166	-	-	-	-
Length Age-3	-	-	-	-	-	283	-	-	289	-
<b>Condition</b> (trap netting)										
Stock	96	90	94	81	80	85	89	94	99	102
Quality	106	92	102	97	88	86	94	97	90	109
Preferred	99	89	98	99	93	81	94	89	129	103
Memorable	97	88	97	95	86	76	88	81	100	105
<b>Blacknose Black Crappie Stocking</b>										
#	102,472	0	29,552	0	0	61,048	68,708	70,036	192,578	0
#/Acre	4.6	0.0	1.3	0.0	0.0	2.7	3.1	3.1	8.6	0.0
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	48,607	134,570	105,202	168,874	104,013	77,696	149,715	80,894	91,269	71,428
Angler Hours/Acre	2.2	6.0	4.7	7.5	4.6	3.5	6.7	3.6	4.0	3.2
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.3	1.5	1.3	1.6	1.2	1.6	1.2	1.64	1.2	1.33
Harvest Rate (any crappie)	0.6	0.6	0.6	0.63	0.39	0.52	0.45	0.82	0.75	0.48
% Released (w hite crappie)	63.2	59.3	61.8	58.4	55.6	64.8	60.8	49.7	35.2	57.6
Mean Weight (w hite crappie)	0.8	0.7	0.9	0.76	0.89	0.89	0.71	0.8	0.8	0.8
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	53,280	368,970	367,510	315,720	221,950	156,100	204,310	66,780	275,700	-

**Sunfish, Old Hickory Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all sunfish)	63,103	70,707	40,453	32,055	27,927	16,060	20,524	13,196	18,180	6,428
Angler Hours/Acre	2.8	3.1	1.8	1.4	1.2	0.7	0.9	0.6	0.8	0.3
<b>Fishing Success</b> (creel)										
Catch Rate (any sunfish)	2.6	3.0	3.9	3.4	2.2	3.6	3.1	2.9	2.7	2.4
Harvest Rate (any sunfish)	1.1	1.2	3.5	1.1	0.3	0.8	1.1	1.0	1.6	1.0
% Released (bluegill)	71.7	75.2	85.0	79.7	81.1	84.9	81.4	81.2	53.4	70.5
Mean Weight (bluegill)	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Sunfish	98,530	119,920	115,900	59,180	68,810	18,910	57,100	15,170	-	-



**Sauger, Old Hickory Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density (gill netting)</b>										
PSD	74	91	40	84	91	26	50	49	77	-
RSD (preferred)	16	21	10	13	38	4	3	5	7	-
CPUE (total)	28	13	11	14	2.8	21	10	4.4	2.56	-
CPUE ≥ Stock	28	13	11	14	2.8	21	9.9	4.4	2.56	-
CPUE ≥ MLL (15-inches)	5	3	1	2	1	1	0.3	0.2	0.17	-
<b>Growth (gill netting)</b>										
Length Age-1	11	-	11	10.9		10.3	10.3	11		-
Length Age-3	15.2	14.3	14.3	15.8		14.7	13.9	12.7		-
<b>Condition (gill netting)</b>										
Stock	95	81	92	93	113	94	82	86	93	-
Quality	95	94	87	96	91	93	85	90	87	-
Preferred	99	106	83	92	90	95	91	98	95	-
Memorable	-	-	-	-	-	-				
<b>Mortality (gill netting)</b>										
Total Mortality				69		50	53	28		-
<b>Stocking</b>										
#	166,434	74,930	97,392	0	63,526	157,524	92,783	255,144	253,226	18,766
#/Acre	7.4	3.3	4.3	0.0	2.8	7.0	4.1	11.3	11.3	0.8
<b>Angling Pressure (creel)</b>										
Angler Hours	69,813	45,943	32,664	30,396	28,485	20,834	31,940	21,260	16,945	15,881
Angler Hours/Acre	3.1	2.0	1.5	1.4	1.3	0.9	1.4	0.9	0.8	0.7
<b>Fishing Success (creel)</b>										
Catch Rate (intended)	2.0	1.6	0.8	0.8	0.5	0.7	1.2	0.85	0.72	1.28
Harvest Rate (intended)	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.16	0.49
% Released	88.3	85.4	83.5	76.5	61.3	89.2	88.4	81.9	66.5	63.2
Mean Weight	1.5	1.5	1.4	1.4	1.5	1.9	1.5	1.71	1.68	2.04
<b>Value of Fishery (Trip Expenditures - creel)</b>										
Sauger	204,340	149,700	117,340	39,470	78,680	52,920	126,870	47,330	43,630	7,300

**Walleye, Old Hickory Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density (gill netting)</b>										
CPUE (total)	2.3	2.1	1.2	-	0.5	-	0.4	0.1	-	-
CPUE $\geq$ Stock	2.3	2.1	1.2	-	0.5	-	0.4	0.1	-	-
CPUE $\geq$ MLL (15-inches)	1.0	0.7	0.3	-	0.3	-	0.2	0.1	-	-
<b>Growth (gill netting)</b>										
Length Age-1	-	12.8	-	-	-	-	-	-	-	-
Length Age-3	-	15.8	-	-	-	-	17.6	-	-	-
<b>Stocking</b>										
#	73,577	130,429	68,363	108,784	145,930	206,748	151,053	103,260	94,025	359,832
#/Acre	3	6	3	5	6	9	7	5	4	16
<b>Angling Pressure (creel)</b>										
Angler Hours	5,046	12,910	6,304	13,659	18,530	16,081	8,520	6,337	9,094	14,296
Angler Hours/Acre	0.2	0.6	0.3	0.6	0.8	0.7	0.4	0.3	0.4	0.6
<b>Fishing Success (creel)</b>										
Catch Rate (intended)	0.56	0.06	0.42	0.42	0.11	0.20	0.05	0.08	0.12	0.17
Harvest Rate (intended)	0.12	0.04	0.10	0.24	0.08	0.16	0.05	0.02	0.11	0.06
% Released	89.0	68.7	91.5	50.9	15.9	26.6	88.4	42.2	13.3	60.4
Mean Weight	1.6	2.5	2.8	2.4	3.6	3.0	1.5	3.4	3.2	3.2
<b>Value of Fishery (Trip Expenditures - creel)</b>										
Walleye	11,610	84,400	10,410	18,530	47,260	15,870	13,920	-	-	-

**Striped Bass, Old Hickory Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Stocking</b>										
#	313,958	254,653	359,378	394,369	357,830	361,657	324,093	321,480	183,911	217,595
#/Acre	14.0	11.3	16.0	17.5	15.9	16.1	14.4	14.3	8.2	9.7
<b>Angling Pressure (creel)</b>										
Angler Hours	53,260	45,943	54,870	41,473	42,548	26,207	24,142	31,969	29,634	33,010
Angler Hours/Acre	2.4	2.0	2.4	1.8	1.9	1.2	1.1	1.4	1.3	1.5
<b>Fishing Success (creel)</b>										
Catch Rate (intended)	0.15	0.20	0.18	0.16	0.11	0.15	0.15	0.13	0.23	0.20
Harvest Rate (intended)	0.04	0.09	0.09	0.07	0.05	0.04	0.04	0.08	0.13	0.06
% Released	84.7	58.7	51.3	76.8	45.4	76.6	75.4	41.0	45.6	64.9
Mean Weight	14.69	5.34	8.13	10.19	12.52	6.36	10.57	6.42	10.87	9.06
<b>Value of Fishery (Trip Expenditures - creel)</b>										
Striped Bass	260,030	197,010	323,530	188,880	233,050	148,790	339,270	250,650	300,440	428,590

**Catfish, Old Hickory Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all catfish)	61,934	80,475	69,273	92,060	73,631	63,160	65,420	40,067	68,848	54,298
Angler Hours/Acre	2.8	3.6	3.1	4.1	3.3	2.8	2.9	1.8	3.0	2.5
<b>Fishing Success</b> (creel)										
Catch Rate (any catfish)	0.29	0.22	0.37	0.38	0.42	0.31	0.45	0.63	0.48	0.55
Harvest Rate (any catfish)	0.27	0.17	0.32	0.22	0.27	0.18	0.26	0.54	0.37	0.43
% Released (channel)	33.3	38.6	26.2	42.3	29.2	46.4	44.3	24.5	28.7	33.5
Mean Weight (channel)	2.51	2.49	2.99	2.36	2.67	1.86	2.05	2.39	2.17	2.18
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Catfish	151,880	202,510	187,110	129,630	247,510	120,250	177,330	104,130	237,480	221,830

**Habitat, Old Hickory Reservoir**

Type of Work	Details	Quantity	
		New	Renovated
Corregated Pipe Structures	<b>Fishing Piers</b>		
	10 Structures Drakes Creek Pier		
	10 Structures Rockland Pier		
	10 Structures Shutes Branch East Pier		
	9 Structures Dickerson Chapel Pier		
	10 Structures Lock 4 Park Pier		
	6 Structures Lock4 Road		
	10 Structures Shute Branch West Pier		
Corregated Pipe Structures	16 Bouyed Fish Attractor Sites	15 Structures at each Site	
Rebrush	16 Bouyed Fish Attractor Sites	10 Trees at each site	
New sites			

**Water Quality Monitoring - 2015**

Parameter	Sampling Period	Water Quality	
Temperature	July - September	Good	No thermal stratification
Dissolved Oxygen	July - September	Good	No chemical stratification

### J. Percy Priest Reservoir

#### Description

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**Area (acres):** 14,200      **Mean Depth (feet):** 28      **Shoreline (miles):** 265  
**Counties:** Davidson, Rutherford, and Wilson  
**Full Pool Elevation (feet-msl):** 490      **Winter Pool Elevation (feet-msl):** 483  
**Dam Completion:** 1969

#### Summary:

J. Percy Priest Reservoir provides a variety of fishing opportunities, of which black bass fishing was the most popular in 2015 accounting for 30% of the targeted effort. Anglers spent 114,731 hours fishing for largemouth bass and 6,224 hours fishing for smallmouth bass. Tournament bass fishing effort declined in 2015, percent effort by tournament and non-tournament anglers was 16% and 83%, respectively.

Fishing pressure on J. Percy Priest continues to be among the highest in the state with 26.6 angler hours per acre for all species, of that largemouth bass account for 8.0 angler hours per acre. Targeted catch rate for largemouth bass has remained constant in recent years ranging from 0.6 to 0.7 fish per hour. The 2015 catch rate was 0.68. This largemouth bass fishery continues to be very good despite the tremendous angling pressure. Overall abundance of largemouth bass from electrofishing was very good with mean catch per unit effort (CPUE) of 112 fish/hour. Abundance of sub-stock largemouth bass was high (16/hour). These fish should recruit to the fishery in 2017-2018. Electrofishing samples also indicated a high abundance (18/hour) of fish greater than 15 inches (minimum length limit).

The popularity of crappie fishing was slightly less than largemouth bass in 2015 with 29.5% of the total effort, accounting for 111,680 hours of fishing for crappie on Percy Priest. Catch rates for crappie increased in 2015 to 1.75 crappie/hour (from 1.4 in 2014). The higher catch rates may be indicative of stronger year classes since 2014. Trap net results in fall 2014 and fall 2015 indicated strong year classes that should provide excellent fishing in fall 2016 and 2017 as they exceed ten inches.

The majority of the angler catch recorded from creel surveys has traditionally been white crappie. The 2015 creel survey again indicated a species ratio approaching 1:1. The abundance of crappie catch from creel surveys in 2015 was comprised of 53% white crappie and 47% black crappie. Catch from fall trap nets and creel survey data indicate a slow progression from a white crappie dominated fishery to a black crappie fishery.

Hybrid striped bass is an important component of the Percy Priest Reservoir fishery, and annual stockings are critical to maintaining this resource. Fishing for temperate bass accounted for 31,765 angler hours in 2015 of that 29,580 were targeted toward hybrid (Cherokee) bass. Intended angler hours and catch rate have rebounded since the decline from weaker year classes in 2010 and 2011. Catch rates from creel surveys in 2015 was good (0.57 fish/angler hour). Relative abundance determined from fall gill netting was high (7.4 fish/net night). Recruitment of stocked fish, determined

from experimental gill net sampling was excellent. Age 0 cherokee bass (2015 year class) were captured at a rate of 2.6 fish/net night. Age 1 (2014 year class) were caught with similar results (2.1 with fish/net night). Successive strong year classes should ensure good fishing for 2-3 years, since few fish exceed four years old and most fish exceed the minimum length of 15 inches before age 2. Cherokee bass are completely dependent on hatchery stocking and fingerling quality is critically important to insure the success of the fishery.

Striped bass have been stocked into Percy Priest since 1968 and continue to be stocked annually. Because of water quality issues, stocking rates of striped bass have been reduced and hybrid striped bass stocking numbers have increased. Hybrid striped bass are much more capable of coping with warmer summertime water temperatures. Striped bass are more difficult to sample with conventional sampling gear, thus we depend on creel data to evaluate the fishery. In 2015 intended angler hours dropped to 2,165. This was an all-time low and is probably due to a switch by anglers to the more abundant hybrid as the intended species. Stocking Striped Bass in Percy Priest is a lower priority than other middle Tennessee main stream reservoirs.

Management of catfish on large reservoirs is often difficult and sometimes overlooked. It is an important component to the J. Percy Priest Reservoir fishery. Creel surveys indicated channel catfish made up the majority of the catch (85%) in 2015. Even though catfishing has been declining steadily for the past 10 years, it accounted for 20,209 angler hours in 2015. Economic factors may influence this decline or fisherman may switch to another intended species. Creel surveys may slightly under - estimate catfishing, since so many catfish anglers fish at night.

Bank fishing areas are important on Percy Priest because of the close proximity to several urban areas. These areas are popular for family fishing and recreation. Stewarts Creek and Vivrett Creek are managed with the bank fisherman in mind. Fishing piers and fishing trails are continually maintained. Fish attractors are added annually.

Habitat work on Percy Priest in 2015 included: planting 650 cypress trees, refurbished 30 stake beds, deployed 200 Christmas trees, deployed 300 corrugated pipe/concrete block structures at buoyed fish attractor sites and deployed 45 corrugated pipe/concrete block structures around fishing piers.

**Angler Effort and Expenditures, J. Percy Priest Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	700,023	681,397	783,969	697,239	492,224	457,914	423,797	378,199	416,833	378,235
Angler Hours Per Acre	49.3	48.0	55.2	49.1	34.7	32.2	29.8	26.6	29.4	26.6
Angler Trips	148,614	145,615	174,502	149,723	114,955	97,370	95,113	86,277	96,782	89,673
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	1,919,600	1,956,150	3,422,680	1,867,870	1,359,420	1,369,540	1,925,380	1,140,920	762,360	365,690



**Black Bass, J. Percy Priest Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	252,197	252,455	270,823	223,305	164,842	167,896	152,658	129,092	126,956	120,955
(hrs/acre)	17.8	17.8	19.1	15.7	11.6	11.8	10.8	9.1	8.9	8.5
Any Black Bass (hrs)	1,412	0	1,181	0	84	920	209	667	622	-
(hrs/acre)	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	-
Largemouth Bass (hrs)	240,409	246,207	266,450	214,157	156,848	155,689	147,782	120,527	117,263	114,731
(hrs/acre)	16.9	17.3	18.8	15.1	11.0	11.0	10.4	8.5	8.3	8.1
Smallmouth Bass (hrs)	8,849	6,248	2,570	8,434	7,757	10,122	4,376	7,905	8,414	6,224
(hrs/acre)	0.6	0.4	0.2	0.6	0.5	0.7	0.3	0.6	0.6	0.4
Spotted Bass (hrs)	1,527	0	622	714	153	1,165	291	0	656	-
(hrs/acre)	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	-
<b>Tournaments (all black bass)</b>										
# Tournaments (BITE)	4	6	4	-	-	-	-	-	-	-
Pounds/Angler Day (BITE)	3.04	4.81	2.32	-	-	-	-	-	-	-
Bass/Angler Day (BITE)	1.15	2	1.36	-	-	-	-	-	-	-
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	857,040	914,030	1,383,880	806,790	626,290	673,440	701,080	721,890	606,450	334,740
Any Black Bass	0	0	4,700	0	0	0	0	0		-
Largemouth Bass	823,720	894,400	1,371,980	777,530	597,970	651,270	693,140	694,510	592,880	330,530
Smallmouth Bass	32,980	19,630	7,200	29,260	27,680	22,170	7,940	27,380	13,570	4,210
Spotted Bass	340	0	0	0	640	0	0	0		-

**Largemouth Bass, J. Percy Priest Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	5	16	13	10	14	12	6	8	17	16
<b>Density</b> (electrofishing)										
PSD	66	52	71	58	61	71	72	70	73	65
RSD (preferred)	23	18	22	16	17	21	20	19	20	18
CPUE (total)	82	141	85	84	118	67	107	87	115	112
CPUE ≥ Stock	77	125	72	74	104	55	101	79	98	96
CPUE ≥ MLL (15-inches)	17	24	16	13	17	11	20	15	20	17
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	7.4	-	-	-	-	-	-	-
Length Age-3	-	-	13.0	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	92	94	91	86	90	89	92	92	91	91
Quality	91	92	90	87	87	88	92	92	92	90
Preferred	94	94	96	95	94	94	91	92	92	91
Memorable	105	95	95	96	102	96	94	97	92	95
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	40	-	-	-	-	-	-	-
<b>Stocking</b>										
#	33,814	51,777	21,632	27,621	11,747	96,526	0	0	0	0
#/Acre	2.4	3.6	1.5	1.9	0.8	6.8	0.0	0.0	0.0	0.0
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.61	0.66	0.63	0.61	0.56	0.63	0.7	0.68	0.68	0.68
Harvest Rate (intended)	0.04	0.05	0.04	0.03	0.03	0.04	0.04	0.09	0.08	0.07
% Released	93	92.1	93.1	94.5	92.7	92.3	92.7	85.6	86.6	86.9
Mean Weight	2.52	2.47	2.63	2.66	2.47	1.91	2.2	2.58	2.56	2.58

**Smallmouth Bass, J. Percy Priest Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Stocking</b>										
#	0	0	26,910	12,924	0	0	0	9,741	0.0	6,384.0
#/Acre	0.0	0.0	1.9	0.9	0.0	0.0	0.0	0.7	0.0	0.4
<b>Fishing Success (creel)</b>										
Catch Rate (intended)	0.3	0.3	0.4	0.3	0.3	0.3	0.17	0.12	0.12	0.16
Harvest Rate (intended)	0.04	0	0	0.01	0	0	0	0	0	0.05
% Released	88.9	90.3	86.6	95.1	90.5	97	92.4	93.4	81	86
Mean Weight	2.6	3.38	2.09	2.7	2.78	2.17	2.02	3.32	3.75	3.29

**Spotted Bass, J. Percy Priest Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	1	4	4	1	5	1	0	0	0	1
<b>Density</b> (electrofishing)										
PSD	64	44	60	56	45	64	70	71	61	59
RSD (preferred)	9	4	6	11	4	2	7	9	14	15
CPUE (total)	32	31	27	38	43	42	20	17	8	8
CPUE $\geq$ Stock	31	27	23	37	39	40	20	17	8	8
<b>Condition</b> (spring electrofishing)										
Stock	99	102	97	95	92	93	96	101	94	96
Quality	90	90	94	88	88	90	92	96	93	96
Preferred	90	90	87	83	73	76	92	94	96	98
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.75	-	1.51	0.00	0.00	1.21	1.27	-	0.00	-
Harvest Rate (intended)	0.08	-	0.00	0.00	0.00	0.36	1.27	-	0.00	-
% Released	85.7	89.5	89.2	81.3	88.1	77.3	78.9	73.6	67.9	75.8
Mean Weight	1.06	1.04	1.01	0.91	0.79	0.92	0.93	1.18	0.90	1.05

**White Crappie, J. Percy Priest Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.4	0.6	1.2	3.8	1.7	0.7	0.0	0.1	0.6	0.0
<b>Density</b> (trap netting (t) /electrofishing (e))										
PSD (e)	86	98	98	96	94	97	100	100	100	100
RSD (preferred) (e)	36	66	54	52	50	79	63	78	94	100
CPUE (total) (t)	0.9	1.3	1.6	4.2	2.9	1.3	1	0.2	0.8	0.6
CPUE $\geq$ Stock (t)	0.5	0.7	0.5	0.4	1.3	0.6	1	0.2	0.2	0.6
CPUE $\geq$ MLL (10-inches) (t)	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.15	0	0.05
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	7.8	7.5	7.7	-	-	-	-	-	-
Length Age-3	10.7	10.8	10.7	10.4	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	99	85	102	-	-	-	-	-	93	98
Quality	99	99	107	99	-	-	94	103		
Preferred	99	94	105	95	-	-	90	99	98	86
Memorable	101	91	98	104	-	-	90	-	92	
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	42	48	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	13,572	-	-	-	-	-	-
#/Acre	-	-	-	1.0	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	170,930	156,386	174,730	164,874	109,781	116,938	123,763	116,284	112,385	111,680
Angler Hours/Acre	12.0	11.0	12.3	11.6	7.7	8.2	8.7	8.2	7.9	7.9
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.02	1.23	1.28	1.56	1.4	1.72	1.93	1.64	1.4	1.75
Harvest Rate (any crappie)	0.5	0.52	0.52	0.63	0.5	0.61	0.65	0.79	0.86	0.68
% Released (w hite crappie)	55.7	59.4	62.3	54.4	60.7	61.3	62.9	57.7	41.3	62.8
Mean Weight (w hite crappie)	0.75	0.83	0.74	0.76	0.81	0.77	0.75	0.77	0.77	0.76
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	319,870	395,810	348,550	354,120	315,260	300,090	546,360	272,500	95,530	31,030

**Black Crappie, J. Percy Priest Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.7	0.9	4	1.1	1.25	2.1	0.2	0.73	1.75	2.4
<b>Density</b> (trap netting)										
PSD	100	100	95	100	67	33	69	98	36	71
RSD (preferred)	70	40	22	65	39	7	15	85	10	29
CPUE (total)	0.9	1.1	4.2	1.5	2.1	2.8	0.5	1.1	2.8	3.53
CPUE $\geq$ Stock	0.2	0.3	0.2	0.5	0.8	0.7	0.5	0.4	1.05	1.13
CPUE $\geq$ MLL (10-inches)	0.1	0.1	0.1	0	0.3	0.1	0.1	0.2	0.1	0.33
<b>Growth</b> (trap netting)										
Length Age-2	-	9.1	8.8	8.9	-	-	-	-	-	-
Length Age-3	-	10.8	11.1	10.7	-	-	-	-	-	-
<b>Condition</b> (trap netting)										
Stock	102	104	107	102	-	93	85	96	97	89
Quality	109	102	114	104	-	96	91	104	96	93
Preferred	101	104	109	102	-	82	93	99	101	87
Memorable	-	-	97	95	-	89	-	90	96	89
<b>Stocking</b>										
#	119,895	128,514	105,303	44,980	142,268	116,288	108,216	206,437	184,617	0
#/Acre	8.4	9.1	7.4	3.2	10.0	8.2	7.6	14.5	8.2	0.0
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	170,930	156,386	174,730	164,874	109,781	116,938	123,763	116,284	112,385	111,680
Angler Hours/Acre	12.0	11.0	12.3	11.6	7.7	8.2	8.7	8.2	7.9	7.9
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.02	1.23	1.28	1.56	1.4	1.72	1.93	1.64	1.4	1.75
Harvest Rate (any crappie)	0.5	0.52	0.52	0.63	0.5	0.61	0.65	0.79	0.86	0.68
% Released (black crappie)	40.5	52	49.2	44.1	56.2	61.9	37.5	44.6	34.1	50.4
Mean Weight (black crappie)	0.77	0.84	0.82	0.79	0.79	0.8	0.75	0.8	0.79	0.79
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	319,870	395,810	348,550	354,120	315,260	300,090	546,360	272,500	95,530	31,030

**Sunfish, J. Percy Priest Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all sunfish)	25,663	20,716	23,340	19,267	21,378	19,641	8,736	10,936	9,711	
Angler Hours/Acre	1.8	1.5	1.6	1.4	1.5	1.4	0.6	0.8	0.7	
<b>Fishing Success</b> (creel)										
Catch Rate (any sunfish)	2.15	1.94	2.31	1.66	2.37	2.94	3.19	2.78	1.12	2.37
Harvest Rate (any sunfish)	0.59	0.71	1	0.97	1.13	1.28	1.53	1.16	1.49	1
% Released (bluegill)	75.2	70.4	69.6	64.6	53.7	63.1	67.4	67	60.6	63.5
Mean Weight (bluegill)	0.34	0.3	0.25	0.28	0.2	0.25	0.27	0.23	0.22	0.21
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Sunfish	70,950	41,570	53,850	33,560	25,960	28,450	1,440	13,810	-	-

**Striped Bass, J. Percy Priest Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Substock CPUE	-	0.00	-	-	0.00	0.10	0.17	0.00	0.00	
<b>Density</b> (gill netting)										
CPUE (total)	-	1.3	-	-	0.1	0.1	0.17	0.16	0.3	
CPUE ≥ Stock	-	1.3	-	-	0.1	0	0	0.16	0	
CPUE ≥ 15-inches	-	1.3	-	-	0.1	0	0	0.08	0.3	
<b>Growth</b> (gill netting)										
Length Age-2	-	21.6	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	82,008	79,631	48,885	55,665	85,038	74,116	35,340	68,748	29,898	34,073
#/Acre	5.8	5.6	3.4	3.9	6.0	5.2	2.5	4.8	2.1	2.3
<b>Angling Pressure</b> (creel)										
Angler Hours	40,631	27,894	26,829	28,263	12,665	8,388	5,465	5,898	4,457	2,185
Angler Hours/Acre	2.9	2.0	1.9	2.0	0.9	0.6	0.4	0.4	0.3	0.2
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.09	0.13	0.07	0.17	0.11	0.06	0	0.00	0.03	0.12
Harvest Rate (intended)	0.02	0.02	0.02	0.03	0.02	0.02	0	0.00	0.00	0.06
% Released	78.2	81.6	63.7	74.9	39.9	72	78.2	76.1	85.6	84.3
Mean Weight	8.82	9.34	5.66	8.23	4.28	3.6	5.2	5.9	3.56	7.95
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Striped Bass	111,180	106,180	86,640	70,800	59,600	14,060	250	430	2,750	-



**Catfish, J. Percy Priest Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure (creel)</b>										
Angler Hours (all catfish)	45,197	43,636	48,914	45,250	38,423	24,908	28,008	28,764	21,253	20,209
Angler Hours/Acre	3.2	3.1	3.4	3.2	2.7	1.8	2.0	2.0	1.5	1.4
<b>Fishing Success (creel)</b>										
Catch Rate (any catfish)	0.3	0.3	0.3	0.2	0.37	0.29	0.36	0.21	0.34	0.32
Harvest Rate (any catfish)	0.2	0.3	0.2	0.2	0.37	0.27	0.25	0.18	0.03	0.27
% Released (channel)	30.8	23	37	26.9	17.3	22	42.5	24.6	31.8	31.2
Mean Weight (channel)	1.52	1.65	1.58	1.92	1.71	1.67	2.07	2.06	1.76	1.94
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Catfish	133,250	84,970	134,740	123,520	60,330	79,150	103,520	77,740	8,600	-

**Cherokee Bass, J. Percy Priest Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Age-0 CPUE	-	1.8	-	-	0.3	0.2	1.5	5.1	0.5	2.6
<b>Density</b> (gill netting)										
PSD						36	45	31	91	60
RSD (preferred)						0	45	29	79	42
CPUE (total)	-	9.8	-	-	4.5	1.1	2.8	7.3	4.75	7.4
CPUE $\geq$ Stock	-	9.5	-	-	4.3	0.9	1.3	6.9	0.42	7.3
CPUE $\geq$ 15-inches	-	8.1	-	-	3.7	0.6	1.3	2	3.75	3.75
<b>Growth</b> (gill netting)										
Length Age-2	-	19.1	-	-	19.0	19.3	20.3	-	19.1	
Length Age-3	-	21.3	-	-	21.5	21.6	21.6	23.1	21.1	
<b>Condition</b> (gill netting)										
Stock	95.0	-	-	-	101.0	99.0	96.0	98.7	93.8	88.3
Quality	-	-	-	-	93.0	96.0	-	86.3	97.5	95.6
Preferred	89.0	-	-	-	87.0	89.0	86.0	91.5	98.7	86.6
Memorable	85.0	-	-	-	81.0	84.0	91.0	97.1	93.4	82.2
<b>Stocking</b>										
#	79,046	44,685	69,600	116,448	101,665	110,734	86,407	106,598	217,459	192,684
#/Acre	5.6	3.1	4.9	8.2	7.2	7.8	6.1	7.5	15.3	13.6
<b>Angling Pressure</b> (creel)										
Angler Hours	19,762	19,343	25,669	34,072	19,732	25,819	11,721	11,419	25,449	29,580
Angler Hours/Acre	1.4	1.4	1.8	2.4	1.4	1.8	0.8	0.8	1.8	2.1
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.40	0.29	0.52	0.48	0.28	0.18	0.08	0.40	0.38	0.57
Harvest Rate (intended)	0.17	0.11	0.14	0.18	0.14	0.14	0.01	0.12	0.11	0.20
% Released	69.3	73.6	69.4	66	56	38.8	78.2	79.9	77.9	71.5
Mean Weight	4.95	4.52	5.02	5.03	4.16	4.25	5.20	5.47	3.04	3.54
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Cherokee Bass	53,830	45,740	124,720	119,300	42,330	84,970	121,520	20,350	13,610	-

**Habitat Enhancement and, J. Percy Priest Reservoir**

Type of Work	Details	Quantity	
		New	Renovated
Planted	Cypress Trees	650 trees @ 4 sites	
Rebrushed			
Checked and Refurbished	stake beds		All Sites upstream from Hobson Pike
Rebrushed	200 Christmas Trees	10 each, 20 Bouyed Fish Attractor Sites	
Added	Corregated Pipe structures	25 Stew arts Creek Fishing Pier	
Added	Corregated Pipe structures	20 Vivrette Creek Fishing Pier	
Added	300 Corregated Pipe structures	15 each, 20 Bouyed Fish Attractor sites	

**Water Quality Monitoring - 2015**

Parameter	Sampling Period	Water Quality
Temperature	July to August	normal
Dissolved Oxyged	July to August	normal

## Normandy Reservoir

### Description

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**Area (acres):** 3,048**Mean Depth (feet):** 36.1**Shoreline (miles):** 72**Counties:** Coffee and Bedford**Full Pool Elevation (feet-msl):** 875**Winter Pool Elevation (feet-msl):** 859**Dam Completion:** 1976

### Summary

In 2015, anglers fished a total of 136,294 hours (44.7 hours/acre) on Normandy Reservoir. The 2015 total fishing effort value was an increase of 5.4% over the previous year's value. Over the past two years, total fishing effort has varied only minimally; however, total fishing effort on Normandy Reservoir fluctuated notably from 2008 to 2011. The 2015 total fishing effort value was the highest documented during the last seven creel surveys. The increase in 2015 total fishing effort was the result of a 62.6% increase in the number of angler trips (since 2011).

Black bass (largemouth bass, spotted bass, and smallmouth bass) were the most targeted species in Normandy Reservoir, accounting for 62.5% of the directed angler effort in 2015. For largemouth bass, the mean relative abundance estimate of stock length and longer largemouth bass captured during spring electrofishing samples was 46.0 fish / hour, which rated as "average" for Normandy Reservoir. Recruitment of largemouth bass was not evident, as indicated by an electrofishing substock relative abundance value of 0.0 fish / hour. The calculated PSD value of 65.0 % indicated a balanced largemouth bass population with a moderate abundance of "quality" length and "preferred" length largemouth bass. The 2015 PSD value indicated that the 15-inch minimum length limit continues to be successful at providing a quality fishery for anglers. During standard 2016 spring electrofishing surveys, largemouth bass growth rates and age structure will be determined through the collection of individuals for age analysis. This analysis occurs every ten years, and should confirm a normal largemouth bass age structure and an above average largemouth bass growth rate.

The mean total abundance of spotted bass (15.0 fish / hour) was much lower than the mean total abundance of largemouth bass (53.0 fish / hour). Together, these two species provide the majority of fishing opportunities for black bass anglers. Of the two species, spotted bass have been released at a lower rate (71.4%) than largemouth bass (79.8). The mean relative abundance estimate of stock length spotted bass captured during spring electrofishing samples was 4.3 fish / hour. This value was rated as low. Since 2006, recruitment of spotted bass has been consistent, yet average, in every year but 2015. Spotted bass reproduction has traditionally been consistent; highly successful spawns were documented in 2005 and 2009. Both spawns recruited successfully. Young-of -the-year spotted bass were not detected in 2015. The calculated PSD value of 68.0%, although slightly high, indicated a balanced spotted bass population with a low abundance of "quality" length and "preferred" length spotted bass. Calculated weight indices indicated the condition of spotted bass to be "good" to "excellent." The continued elevated relative weight of spotted bass was again the result of an abundance of forage, especially threadfin shad. During standard 2016 spring electrofishing surveys, spotted bass growth rates and age structure will also be determined through the collection of individuals for age analysis. This analysis occurs every ten years, and should confirm a normal spotted bass age structure and an above average spotted bass growth rate.

Rocky substrate, which is the preferred habitat of smallmouth bass, is the least abundant habitat type found in Normandy Reservoir. Additionally, since Normandy Reservoir is a highly productive reservoir, water clarity is consistently low. Therefore, as a result of limited habitat and low water clarity, smallmouth bass persist at a minimal level of abundance. Documented total relative abundance of smallmouth bass over the past four years has ranged from 1.0 fish / hour to 3.0 fish / hour. Lastly, since smallmouth bass are not prevalent, directed angler effort for smallmouth bass is extremely low compared to directed angler effort for largemouth bass. Supplemental stockings of smallmouth bass have occurred sporadically over the past ten years, with stocking rates ranging from 0.3 fish / acre to 6.6 fish / acre. However, post-stocking evaluations and creel data have indicated that these stockings have not enhanced the smallmouth bass fishery of Normandy Reservoir.

The black crappie and white crappie fisheries combined (hereafter crappie fishery) comprised the second most popular fishery on Normandy Reservoir. Directed effort for crappie was approximately 31.7% of the total angler directed effort. Assessing crappie reproduction on Normandy Reservoir has been, and continues to be, problematic. As a result, the primary means of assessing the crappie population has been by creel data. Creel data (2015) indicated a 20.4% increase in angler hours per acre since 2014. Furthermore, the angler catch rate of 1.34 crappie / hour was the second highest documented over the past ten years, and rated as “above average.” The mean weight of crappie ranged from 0.70 to 0.96 lbs. per crappie. The documented mean weight range was rated as “good.” The effect of variable recruitment has been documented in the white crappie population, and continues to be a management issue. White crappie reproduction is sporadic, with successful spawns occurring every four to six years. Black crappie reproduction is less sporadic, and has been, and continues to be, bolstered by yearly stockings. Over the past two years, black crappie stocking rates have exceeded 31.0 fish / acre. Recruitment of stocked crappie has been documented by creel data (the 2015 catch rate of crappie was the second highest documented over the previous ten years). Based on the current status of the crappie fishery, anglers have been satisfied with the 10.0 inch minimum length limit, have been experiencing higher catch rates, and have been harvesting crappie at a slightly higher rate than normal above the minimum length limit.

The initial stocking of walleye into Normandy Reservoir occurred in 2007; over the past eight years, one major walleye stocking event per year has occurred. Stocking rates of walleye have ranged from 21.0 fish / acre to 37.9 fish / acre over the past nine years. The mean relative abundance estimate of stock length walleye captured during fall gill net samples was 3.9 fish / net night, which rated as “average” for Normandy Reservoir. As a result of consecutive yearly stockings since 2007, recruitment of walleye has been very consistent. Over the past four years, the abundance of age-0 walleye has ranged from 0.8 fish / net night to 3.8 fish / net night. Although these values are slightly low, they are indicative of consistent yearly recruitment of stocked walleye. The calculated PSD value of 64.1% indicated a slightly out-of-balance walleye population, with an elevated abundance of “quality” length and “preferred” length walleye. The aforementioned indicated that the 16-inch minimum length limit has been successful at providing a quality walleye fishery for anglers. During standard gill net samples, walleye growth rates (mean length at age) have been determined for all walleye collected over the previous eight years. Based on this data, mean length at age for age-1 walleye has displayed only minimal variation over the past four years. However, mean length at age for age-3 walleye has declined over the previous four years (approximately a 2.1 inch decrease in mean length for age-3 walleye). Over the same four year period (2012—2015), elevated stocking rates (2012, 2014, and 2015) had been employed. These elevated stocking rates may be negatively affecting the documented growth rates of age-3 walleye. Calculated condition factors have also decreased (since 2013), with ratings declining from “good” to “fair”

for “quality” and “preferred” length walleye. Over the previous two years, angling pressure has decreased modestly. Additionally, the percent of walleye released by anglers has decreased by 55.5% since 2014. The decreasing release rate coincides with an increasing abundance of quality and preferred length walleye in the walleye population of Normandy Reservoir.

Habitat enhancements on Normandy Reservoir by the southern reservoir crew of region two was limited in 2015. Extensive habitat work on Normandy Reservoir occurs every other year (on a two year rotational basis). In this rotation, Woods Reservoir and Normandy Reservoir receive extensive habitat improvements in one year; the following year, Tims Ford Reservoir receives extensive habitat improvements. As a result, only minor habitat improvements occurred on Normandy Reservoir in 2015. Bald cypress trees were not planted. Christmas trees were not added to “shallow” and “deep” water sites. However, artificial fish attractors were placed into Normandy Reservoir. Four spawning benches (for black bass spawning), five stake beds, eight bamboo structures, and forty-six twin corrugated pipe structures were installed at new locations. At existing spawning bench sites, seventeen spawning benches were refurbished. Lastly, to maintain the rotational habitat schedule, extensive habitat work on Normandy Reservoir has been scheduled for 2016.

**Lakewide Angling Summary, Normandy Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	47,007	x	35,387	43,316	98,443	53,464*	x	x	128,907	136,294
Angler Hours Per Acre	15.0	x	12.0	14.0	32.0	18*	x	x	42.3	44.7
Angler Trips	9,631	x	7,260	8,561	18,601	9,823*	x	x	25,165	26,247
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	x	x	x	265,850	541,540	179,430*	x	x	555,030	601,150

**Black Bass, Normandy Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	21,781	x	18,353	19,629	36,459	20889*	x	x	66,208	67,673
(hrs/acre)	7.1	x	6.0	6.4	11.9	6.9	x	x	21.7	22.2
Any Black Bass (hrs)	21,579	x	18,176	17,973	32,382	20,320	x	x	64,990	66,747
(hrs/acre)	7.1	x	5.9	5.9	10.6	6.7	x	x	21.3	21.9
Largemouth Bass (hrs)	202	x	177	866	2,782	42*	x	x	94	674
(hrs/acre)	0.1	x	0.1	0.3	0.9	0.0	x	x	0.0	0.2
Smallmouth Bass (hrs)	x	x	x	x	94	34*	x	x	x	139
(hrs/acre)	x	x	x	x	0.0	0.0	x	x	x	0.0
Spotted Bass (hrs)	x	x	x	790	1,201	493*	x	x	1,124	113
(hrs/acre)	x	x	x	0.3	0.4	0.2	x	x	0.4	0.0
<b>Tournaments (all black bass)</b>										
# Tournaments (BITE)	x	x	x	x	x	x	x	x	x	x
Pounds/Angler Day (BITE)	x	x	x	x	x	x	x	x	x	x
Bass/Angler Day (BITE)	x	x	x	x	x	x	x	x	x	x
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	x	x	x	151,920	238,570	103,170	x	x	358,700	333,070
Any Black Bass	x	x	x	142,150	216,660	102,590	x	x	354,820	325,230
Largemouth Bass	x	x	x	5,650	31,200	x*	x	x	100	5,960
Smallmouth Bass	x	x	x	x	x	x*	x	x	x	870
Spotted Bass	x	x	x	4,120	710	580*	x	x	3,780	1,010



**Largemouth Bass, Normandy Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	9	2	0	0	3	3	4	3	3	0
<b>Density</b> (electrofishing)										
PSD	64	75	89	95	x	10	78	85	72	65
RSD (preferred)	35	31	67	68	40	42	37	53	46	40
CPUE (total)	48	30	23	68	47	36	60	46	44	53
CPUE $\geq$ Stock	39	28	23	18	44	33	55	44	41	46
CPUE $\geq$ MLL (15-inches)	17	9	15	13	18	14	19	23	19	24
<b>Growth</b> (electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	96	101	105	*	98	88	x	92	94	96
Quality	96	99	101	92	98	93	93	95	95	96
Preferred	100	99	103	99	95	83	83	92	97	95
Memorable	99	113	108	101	100	80	82	94	77	100
<b>Mortality</b> (electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
<b>Stocking</b>										
#	0	0	0	0	0	27,072	0	0	5967	0
#/Acre	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0	2.0	0.0
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.52	x	0.28	0.12	0.56	0	x	x	0.5	0.27
Harvest Rate (intended)	0	x	0	0.02	0.08	0	x	x	0	0.07
% Released	77.8	x	81.4	87.2	78.4	92.3*	x	x	77	79.8
Mean Weight	2.8	x	3	3	3.4	2.8*	x	x	2.46	3.21
<b>Value of Fishery</b> (Trip Expenditures)										
Largemouth Bass	x	x	x	5650	31200	x*	x	x	100	5,960

**Smallmouth Bass, Normandy Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	*	*	*	*	*	*	1	0	3	0
<b>Density</b> (electrofishing)										
PSD	*	*	*	*	*	*	67	100	78	0
RSD (preferred)	*	*	*	*	*	*	33	100	56	0
CPUE (total)	*	*	*	*	*	*	3	1	3	2
CPUE $\geq$ Stock	*	*	*	*	*	*	2	1	3	1
CPUE $\geq$ MLL (18-inches)	*	*	*	*	*	*	0	0	0	0
<b>Growth</b> (electrofishing)										
Length Age-1	*	*	*	*	*	*	x	x	x	x
Length Age-3	*	*	*	*	*	*	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	*	*	*	*	*	*	x	x	76	x
Quality	*	*	*	*	*	*	x	x	88	x
Preferred	*	*	*	*	*	*	x	80	75	x
Memorable	*	*	*	*	*	*	x	x	77	x
<b>Mortality</b> (electrofishing)										
Total Mortality	*	*	*	*	*	*	x	x	x	x
<b>Stocking</b>										
#	20,065	1,800	1,556	0	4,240	0	0	3,904	14390	0
#/Acre	6.6	0.6	0.5	0.0	1.4	0.0	0.0	0.3	4.7	0.0
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	x	x	x	x	0	0	x	x	x	0
Harvest Rate (intended)	x	x	x	x	0	0	x	x	x	0
% Released	55.4	x	88.7	84.9	*	100	x	x	91	77.7
Mean Weight	*	x	*	*	*	*	x	x	3.03	3.1
<b>Value of Fishery</b> (Trip Expenditures)										
Smallmouth Bass	x	x	x	x	x	x*	x	x	x	870

**Spotted Bass, Normandy Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	9	2	1	2	15	3	3	1	3	0
<b>Density</b> (electrofishing)										
PSD	49	71	80	68	x	20	58	89	50	68
RSD (preferred)	24	29	36	45	25	33	19	36	15	33
CPUE (total)	42	23	16	13	39	18	28	16	36	15
CPUE ≥ Stock	32	21	15	10	24	20	25	15	33	13
CPUE ≥ MLL (15-inches)	*	*	*	*	*	*	1	2	1	2
<b>Growth</b> (electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	110	104	100	103	103	100	x	107	103	x
Quality	105	*	100	105	104	104	x	100	101	99
Preferred	*	*	102	100	101	92	x	92	97	91
Memorable	*	*	*	*	*	*	x	x	x	x
<b>Mortality</b> (electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
<b>Stocking</b>										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	x	x	x	0.88	0.74	1.1	x	x	0.68	0.5
Harvest Rate (intended)	x	x	x	0.51	0.49	0.07	x	x	0.57	0
% Released	69.3	x	66.5	75.3	68.4	84.0*	x	x	52.7	71.4
Mean Weight	1.4	x	1.2	1.3	1.3	1.4*	x	x	1.31	1.27
<b>Value of Fishery</b> (Trip Expenditures)										
Spotted Bass	x	x	x	x	x	x	x	x	x	1010

**White Crappie, Normandy Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	x	x	x	x	x	x	x	x	x	x
<b>Density</b> (trap netting (t) /electrofishing (e))*										
PSD (e)*	99	100	100	0	x	x	100	x	x	x
RSD (preferred) (e)*	92	50	100	0	50	x	67	x	x	x
CPUE (total) (t)*	x	x	x	x	x	x	x	x	x	x
CPUE $\geq$ Stock (t)*	x	x	x	x	x	x	x	x	x	x
CPUE $\geq$ MLL (10-inches) (t)*	x	x	x	x	x	x	x	x	x	x
<b>Growth</b> (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	76	98	x	x	84	108	x	x	x	x
Quality	86	x	x	x	94	x	106	x	x	x
Preferred	86	x	99	x	x	108	x	x	x	x
Memorable	87	x	101	x	75	x	89	x	x	x
<b>Mortality</b> (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
<b>Stocking</b>										
#	0	6,887	19,761	0	0	0	0	0	0	0
#/Acre	0.0	2.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	19,147	x	11,329	14,795	19,803	18774*	x	x	27,301	34,313
Angler Hours/Acre	6.3	x	3.7	4.9	6.5	6.2	x	x	9.0	11.3
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	0.8	x	0.7	0.7	0.75	1.3*	x	x	1.67	1.34
Harvest Rate (any crappie)	0.4	x	0.3	0.4	0.3	0.5*	x	x	0.7	0.62
% Released (w hite crappie)	12.6	x	8	34.6	22.9	65.8*	x	x	64.9	89.9
Mean Weight (w hite crappie)	0.9	x	1	1	1	.96*	x	x	0.7	0.85
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	x	x	x	111,840	46,040	52,620	x	x	109,380	128,140

**Black Crappie, Normandy Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	x	x	x	x	x	x	x	x	x	x
<b>Density</b> (trap netting (t) /electrofishing (e))*										
PSD (e)*	81	x	100	x	x	x	100	43	75	x
RSD (preferred) (e)*	71	x	88	x	100	50	100	43	50	x
CPUE (total) (t)*	x	x	x	x	x	x	x	x	x	x
CPUE $\geq$ Stock (t)*	x	x	x	x	x	x	x	x	x	x
CPUE $\geq$ MLL (10-inches) (t)*	x	x	x	x	x	x	x	x	x	x
<b>Growth</b> (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	95	x	x	x	101	96	x	111	148	x
Quality	93	94	119	x	x	98	x	x	102	x
Preferred	119	90	x	x	x	106	96	x	111	x
Memorable	88	85	92	x	x	84	x	86	89	x
<b>Mortality</b> (spring electrofishing)										
Total Mortality	*	*	*	*	*	*	x	x	x	x
<b>Stocking</b>										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	19,147	x	11,329	14,795	19,803	18774*	x	x	27,301	34,313
Angler Hours/Acre	6.3	x	3.7	4.9	6.5	6.2*	x	x	9.0	11.3
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	0.8	x	0.7	0.7	0.75	1.3*	x	x	1.67	1.34
Harvest Rate (any crappie)	0.4	x	0.3	0.4	0.3	.5*	x	x	0.7	0.62
% Released (black crappie)	2.4	x	5.6	68.1	30.8	55*	x	x	48.4	60.3
Mean Weight (black crappie)	1.2	x	1.2	1	0.9	.87*	x	x	0.95	1.03
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	x	x	x	111,840	46,040	52,620	x	x	109,380	128,140

**Blacknose Crappie, Normandy Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	x	x	x	x	x	x	x	x	x	x
<b>Density</b> (trap netting (t) /electrofishing (e))*										
PSD (e)*	75	100	92	100	x	x	73.3	66.3	92.9	83.3
RSD (preferred) (e)*	21	100	68	79	79	54	58	50	63	33
CPUE (total) (t)*	x	x	x	x	x	x	x	x	x	x
CPUE ≥ Stock (t)*	x	x	x	x	x	x	x	x	x	x
CPUE ≥ MLL (10-inches) (t)*	x	x	x	x	x	x	x	x	x	x
<b>Growth</b> (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	91	*	107	x	93	98	99	110	92	107
Quality	91	98	108	105	x	102	102	110	99	95
Preferred	88	89	x	104	94	105	93	99	99	87
Memorable	88	90	100	96	90	92	92	94	97	x
<b>Mortality</b> (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
<b>Stocking</b>										
#	37,502	35,185	46,543	128,332	49,115	75,919	93,491	86,629	103,887	97,450
#/Acre	12.3	11.5	15.3	42.1	16.0	24.9	30.7	28.4	34.1	32.0
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	19,147	x	11,329	14,795	19,803	18774*	x	x	27,301	34,313
Angler Hours/Acre	6.3	x	3.7	4.9	6.5	6.2*	x	x	9.0	11.3
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	0.8	x	0.7	0.7	0.75	1.3*	x	x	1.67	1.34
Harvest Rate (any crappie)	0.4	x	0.3	0.4	0.3	.5*	x	x	0.7	0.62
% Released (blacknose crappie)	32.9	x	21.3	47.2	56.9	63.2	x	x	63.8	52.6
Mean Weight (blacknose crappie)	1.1	x	1.3	1	1	.87*	x	x	0.97	0.94
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	x	x	x	111,840	46,040	52,620	x	x	109,380	128,140

**Walleye, Normandy Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Age-0 CPUE	0	1.3	0	1	0.7	0	1.4	0.75	2.2	3.8
<b>Density</b> (gill netting)										
PSD	*	*	*	*	*	*	82.7	86.7	69.7	64.1
RSD (preferred)	*	*	*	*	*	*	10	13	14	8
CPUE (total)	0	1.3	16	14	9	14	8.6	8.16	8.25	10.8
CPUE $\geq$ Stock	0	0	15	13	9	10.5	8.6	8.16	8.25	10.7
CPUE $\geq$ 16-inches	0	0	1	11	6	7	5.8	5.8	4.92	5.92
<b>Growth</b> (gill netting)										
Length Age-1	x	x	x	16.6	15.6	*	16.7	16.3	15.9	16.2
Length Age-3	x	x	x	21.7	20.7	*	20.9	19.9	19.7	18.8
<b>Condition</b> (gill netting)										
Stock	x	x	x	100.0	91.0	96.0	91.0	100.0	92.4	91.7
Quality	x	x	x	94.0	90.0	94.0	87.9	94.8	87.8	85.2
Preferred	x	x	x	87.0	85.0	92.0	84.0	90.1	82.5	78.1
Memorable	x	x	x	x	x	x	x	x	x	70.4
<b>Stocking</b>										
#	0	64,790	64,781	108,688	64,117	89,391	86,961	58,771	115,421	95,823
#/Acre	0.0	21.0	21.0	36.0	21.0	29.0	28.5	19.3	37.9	31.4
<b>Angling Pressure</b> (creel)										
Angler Hours	0	x	117	1,717	12,884	3275*	x	x	8,759	6,218
Angler Hours/Acre	0.0	x	0.0	0.6	4.2	1.1*	x	x	2.5	2.0
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.00	x	0.00	0.40	0.20	0.4*	x	x	0.34	0.51
Harvest Rate (intended)	0.00	x	0.00	0.10	0.15	0.36*	x	x	0.17	0.35
% Released	0	x	0	77.9	28	12.8*	x	x	63.6	28.3
Mean Weight	x	x	x	2.30	2.60	2.4*	x	x	2.57	2.88
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Walleye	x	x	x	980	146,420	9260*	x	x	24,950	31,000

**2015 Habitat Enhancement - Normandy Reservoir**

				Quantity	
Type of Work	Details		New		Renovated
Planted					
Rebrushed					
Checked and Refurbished	Spaw ning Benches to Established Sites		4		17
Rebrushed					
Added	Stake Bed and Corrugated Pipe Structures		5 Stake, 46 Pipe		
Installed	Bamboo Structure		8		

**2015 Water Quality Monitoring - Normandy Reservoir**

Parameter	Sampling Period	Water Quality
Temperature	July to August	normal
Dissolved Oxyged	July to August	normal



### Tims Ford Reservoir

#### Description

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**Area (acres):** 10,600      **Mean Depth (feet):** 28      **Shoreline (miles):** 265

**Counties:** Franklin and Coffee

**Full Pool Elevation (feet-msl):** 888      **Winter Pool Elevation (feet-msl):** 860

**Dam Completion:** 1970

#### Summary:

A yearly creel survey has not been conducted on Tims Ford Reservoir since 2011. The current creel methodology is to conduct a creel survey on one reservoir for a period of four consecutive years, and then redirect the creel survey to one of the remaining two reservoirs for a period of four consecutive years. The cycle repeats after each of the three reservoirs has been sampled for four consecutive years. Based on the results of the last creel survey conducted on Tims Ford Reservoir, anglers spent a total of 45,491 hours (4.0 hours / acre) fishing Tims Ford Reservoir. Since 2007, fishing effort has declined by approximately 46.6 %; the specific reason for the notable decline could not be ascertained. The data collected during the next creel survey period (starting in 2016) will indicate whether or not the decline in fishing effort is continuing.

Based on the results of the last creel survey (conducted in 2011), black bass accounted for approximately 56.2 % of directed angler effort. The black bass fishery of Tims Ford is comprised of two primary fisheries: largemouth bass and smallmouth bass. Spotted bass have occasionally been collected during standard spring electrofishing samples, but this population persists only at a minimal level. For the most abundant black bass (largemouth bass), the density estimate of stock length largemouth bass collected during 2015 electrofishing samples (11.8 fish / hour) was rated as “low.” Based on the substock abundance estimate of 1.0 fish / hour, largemouth bass recruitment was rated as “minimal.” The substock abundance estimates from the previous ten years displayed only minimal year-to-year variation, with the exception of the 2006 substock abundance estimate. In 2006, the substock abundance value was 62.5 % higher than the next highest documented abundance value (2012, 2014). The 2006 substock abundance value indicated a strong 2005 year class. A PSD of 74 indicated the largemouth population to be slightly “out-of-balance,” mainly as a result of an increase in largemouth bass > 15.0 inches. The increase in abundance of largemouth bass > 15.0 inches over the past three years has been the result of successful recruitment and anglers abiding by the fifteen inch minimum length limit. Length frequency data indicated the continued existence of a quality largemouth bass population. Future age data, which will be collected in 2016, will be utilized to confirm that acceptable growth and age structure exists in the largemouth bass population of Tims Ford.

The clearness of the water and a prevalence of cobble / boulder substrate, which comprise large areas of the middle and lower reaches of the reservoir, provide ideal habitat for smallmouth bass. Although directed angler effort for smallmouth bass is less than that for largemouth bass, the fact that some anglers fish for smallmouth bass specifically indicates the relevance of this fishery to anglers. The habitat utilized by smallmouth bass makes obtaining a representative sample through electrofishing or other methods problematic. Therefore, creel data is the primary data utilized to assess this fishery. Based on the last year of creel data (2011), the harvest rate of smallmouth was very low; the percent of smallmouth bass that were released was approximately ninety-seven percent. The mean weight of harvested

smallmouth was 3.30 pounds. The aforementioned indicated that fish above the 18" minimum length limit were available, and were being utilized by anglers. Additionally, based on age data collected during the spring of 2015, the abundance of sub-legal length smallmouth bass (15.0 – 17.9 inches) was elevated (indicating that the minimum length limit regulation has been effective). Based on the results of the 2015 age sample, a total of nine year classes were detected (age-2 to age-10). With the exception of age -1 smallmouth bass, consecutive age groups were detected (age-2 to age-10). Weighted mean length at age-3 was 12.4 inches; smallmouth bass did not reach 18.0 inches in length until age-9. As a result, the growth rate of smallmouth bass was considered slow. Calculated mean weights indicated smallmouth bass to be in fair condition. Since the current age sample indicated consistent natural reproduction, hatchery stockings of smallmouth bass are not required. If inconsistent natural reproduction is documented, hatchery stockings would be considered as a management option.

The black crappie and white crappie fisheries combined (hereafter crappie fishery) comprised the second most popular fishery of Tims Ford Reservoir. Directed effort for crappie was approximately 8.2% of the total angler directed effort. Assessing crappie reproduction on Tims Ford Reservoir has been, and continues to be, problematic. As a result, the primary means of assessing the crappie population has been by creel data. The last creel data was collected in 2011; this data indicated a 60.0% decrease in angler hours per acre since 2010. Furthermore, the angler catch rate of 2.02 crappie / hour was the highest documented catch rate over the previous five creel surveys, and rated as "above average." The mean weight of crappie ranged from 0.7 to 1.0 pounds per crappie. The documented mean weight range was rated as "good." The effect of variable recruitment has been documented in the crappie population, and continues to be a management issue. Crappie reproduction is sporadic, with successful spawns occurring every four to six years. As a result, crappie reproduction has been, and continues to be, bolstered by yearly stockings. Over the past four years, black crappie stocking rates have exceeded 10.0 fish / acre. White crappie stockings have not occurred over the past ten years because of the difficulty in procuring white crappie brood fish. Recruitment of stocked crappie has been documented by creel data; this data has indicated a 74.3% increase in catch rate over the past four creel surveys. Based on the current status of the crappie fishery, anglers have been satisfied with the 10.0 inch minimum length limit, have been experiencing higher catch rates, and have been harvesting crappie at a slightly higher rate than "normal" above the minimum length limit.

The hybrid bass fishery in Tims Ford Reservoir has been increasing in popularity over the past ten years. Both local and out-of-state anglers (from Alabama) have been increasingly pursuing hybrid bass, with many out-of-state anglers using local guide services to help them find and capture hybrid bass. Based on numerous years of forage base data, Tims Ford Reservoir has a moderate abundance of alewife and gizzard shad; threadfin shad abundance continues to display high year-to-year variability. Therefore, the stocking rate of hybrid bass must be closely monitored. The hybrid bass population continues to be monitored yearly through the use of horizontal gill nets. Based on the gill net data collected during 2015, the hybrid striped bass population displayed consistent year-to-year recruitment. The fifteen inch minimum length limit continues to be effective in producing an elevated abundance of hybrids in the fourteen inch length class. Total relative abundance was less than two hybrids per net night; this value has decreased by 45.7% since 2012. The 2015 age sample (additionally generated from the 2015 gill net samples) indicated hybrids could exceed twenty inches by age-2, and twenty-one inches by age-3. Growth rates for both age classes rated as "average," and did not vary appreciably from other middle Tennessee populations. Creel data (2011) indicated angling pressure to be "light", with angler catch rate the highest documented over the past five creel survey periods. Harvest rate of hybrids was low; the percentage of hybrids released exceeded ninety-three percent. Mean weight of hybrids exceeded three and a half pounds; this value was the lowest recorded mean weight since 2005.

Initially to exploit the abundant clupeid populations, striped bass have been stocked into Tims Ford Reservoir for numerous decades. Since the equipment and fishing methods are similar, anglers who target hybrid bass also target stripers. As opposed to gill net monitoring of hybrid bass, gill net monitoring of striped bass has been, and continues to be, an ineffective method. Therefore, creel data has historically been utilized to assess the status of the striped bass fishery. Reported angler catch and harvest rates (2011) of adult striped bass were low, with both values being only slightly above zero. The release rate of striped bass was greater than 85.0%; mean weight was just above four pounds. The 2011 mean weight value was rated as low, and was 44.0% less than the mean weight value recorded in 2005. As a result of hatchery production issues, only 15,538 striped bass fingerlings were stocked into Tims Ford Reservoir in 2015. Over the past ten years, the 2015 striped bass stocking rate was the lowest documented (at 1.5 striped bass per acre).

Stocking of walleye into Tims Ford Reservoir has been occurring yearly over the past two decades. In 2007, as a result of production issues, walleye were not stocked into Tims Ford Reservoir. Based on the length of the stocked fingerlings, the total number of stocked walleye can vary greatly. Stocking rates of walleye have ranged from 7.0 / acre to 16.9 / acre over the past ten years. The mean relative abundance estimate of stock length and longer walleye captured during fall gill net samples was 2.1 fish / hour, which rated as “low” for Tims Ford Reservoir. Since consecutive yearly stockings have occurred since 2007, recruitment of walleye has been consistent. Over the past two years, the abundance of age-0 walleye has ranged from 0.2 to 0.4 / hour. The calculated PSD value of 91.9% indicated an “out-of-balance” walleye population with a low abundance of “stock” length walleye. In spite of the aforementioned, a quality walleye fishery is still evident. During standard gill net samples, walleye growth rates (mean length at age) have been determined for all walleye collected over the previous nine years. Based on the collected age data, mean length at age for age-1 walleye has increased over the previous three years. However, mean length at age for age-3 walleye has remained consistent over the previous three years. Over the same three year period (2012—2014), fairly consistent stocking rates have been employed. The consistency in stocking rates over this three year period has resulted in the uniform growth rate of walleye (to age three). Calculated condition factors indicated walleye to be in “good” to “fair” condition. Since 2010, angling pressure has decreased moderately; additionally, the percent of walleye released by anglers has decreased by 69.2% (from 2007 to 2010). The decreasing release rate coincides with an increasing abundance of quality and preferred length walleye in the Tims Ford Reservoir walleye population.

Habitat enhancements on Tims Ford Reservoir by the southern reservoir crew were fairly extensive in 2015. Concentrated habitat work on Tims Ford Reservoir occurs every other year on a two year rotational basis with the other two southern reservoirs (Woods and Normandy Reservoirs in one year / Tims Ford Reservoir the next year). On Tims Ford Reservoir in 2015, a total of 283 bald cypress trees were planted at two different sites to stabilize shorelines and provide nursery habitat for fish (as the cypress trees mature). Christmas trees are regularly added to marked shallow and deep water sites to provide attractors for mature fish to concentrate around for exploitation by anglers. In 2015, all eighteen marked fish attractor sites were rebrushed with twelve Christmas trees per site ( $N_T = 216$ ). Additionally, forty-three existing spawning benches (two different areas,  $N_T = 43$ ) were refurbished. Artificial fish attractors were not placed into Tims Ford Reservoir in 2015. The next concentrated habitat work on Tims Ford Reservoir will occur in 2017, and will include the following structures and trees: spawning benches (for black bass spawning), stake beds (to concentrate crappie), pipe structures (to concentrate fish), Christmas trees (to concentrate fish), and cypress trees (fish nursery habitat).

**Lakewide Angling Summary, Tims Ford Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	x	80,673	56,407	x	85,254	45,491*	x	x	x	x
Angler Hours Per Acre	x	8.0	5.0	x	8.0	4*	x	x	x	x
Angler Trips	x	15,238	11,642	x	17,234	8,272*	x	x	x	x
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	x	x	x	x	815,790	102,870*	x	x	x	x

**Black Bass, Tims Ford Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	x	48,309	26,982	x	30,917	25,586*	x	x	x	x
(hrs/acre)	x	4.6	2.5	x	2.9	2.4	x	x	x	x
Any Black Bass (hrs)	x	48,116	26,671	x	22,858	23,454	x	x	x	x
(hrs/acre)	x	4.5	2.5	x	2.2	2.2	x	x	x	x
Largemouth Bass (hrs)	x	x	97	x	2,794	x	x	x	x	x
(hrs/acre)	x	x	0.0	x	0.3	x	x	x	x	x
Smallmouth Bass (hrs)	x	193	214	x	5,265	1,944 *	x	x	x	x
(hrs/acre)	x	0.0	0.0	x	0.5	0.2	x	x	x	x
Spotted Bass (hrs)	x	x	x	x	x	188*	x	x	x	x
(hrs/acre)	x	x	x	x	x	0.0	x	x	x	x
<b>Tournaments (all black bass)</b>										
# Tournaments (BITE)	x	x	x	x	x	x	x	x	x	x
Pounds/Angler Day (BITE)	x	x	x	x	x	x	x	x	x	x
Bass/Angler Day (BITE)	x	x	x	x	x	x	x	x	x	x
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	x	x	x	x	249,500	90,450*	x	x	x	x
Any Black Bass	x	x	x	x	136,590	88,120	x	x	x	x
Largemouth Bass	x	x	x	x	32,720	x	x	x	x	x
Smallmouth Bass	x	x	x	x	80,190	2,330*	x	x	x	x
Spotted Bass	x	x	x	x	x	x	x	x	x	x

**Largemouth Bass, Tims Ford Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	8	2	2	2	2	2	3	2	3	1
<b>Density</b> (electrofishing)										
PSD	82	80	85	82	77	21	73	83	87	74
RSD (preferred)	42	41	42	58	40	26	34	37	46	43
CPUE (total)	33	35	15	16	31	13	41	31	39	37
CPUE $\geq$ Stock	28	34	13	15	29	16	38	29	35	35
CPUE $\geq$ MLL (15-inches)	12	13	6	5	11	4	12	11	15	14
<b>Growth</b> (electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	85	97	88	85	86	88	83	84	76	87
Quality	81	92	83	84	87	91	89	84	85	84
Preferred	80	87	82	84	84	90	74	86	84	85
Memorable	x	x	x	87	91	82	74	83	77	x
<b>Mortality</b> (electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
<b>Stocking</b>										
#	2,826	0	0	0	8,716	0	0	0	0	0
#/Acre	0.3	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	x	x	0	x	0.57	x	x	x	x	x
Harvest Rate (intended)	x	x	0	x	0.02	x	x	x	x	x
% Released	x	84	86.8	x	85.2	94.3*	x	x	x	x
Mean Weight	x	2.6	2.2	x	2.3	2.3*	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures)										
Largemouth Bass	x	x	x	x	32,720	x	x	x	x	x

**Smallmouth Bass, Tims Ford Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	0	1	0	0	3	3	1	0	0	0
<b>Density</b> (electrofishing)										
PSD	79	78	63	80	78	42	61	86	82	93
RSD (preferred)	48	50	13	65	66	38	42	52	72	75
CPUE (total)	14	18	2	5	10	4	9	14	9	13
CPUE $\geq$ Stock	14	17	2	4	7	3	8	14	9	13
CPUE $\geq$ MLL (18-inches)	2	2	0	3	5	1	1	2	1	1
<b>Growth</b> (electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	NA
Length Age-3	x	x	x	x	x	x	x	x	x	12.4
<b>Condition</b> (spring electrofishing)										
Stock	88	x	91	*	78	79	81	89	82	89
Quality	81	x	77	*	83	88	78	83	75	82
Preferred	80	68	82	*	77	85	70	76	73	79
Memorable	73	68	x	*	80	76	63	68	74	75
<b>Mortality</b> (electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
<b>Stocking</b>										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	x	0	0.47	x	0.46	0.77	x	x	x	x
Harvest Rate (intended)	x	0	0	x	0.01	0.02	x	x	x	x
% Released	x	94.8	94	x	96.4	96.9	x	x	x	x
Mean Weight	x	3	3.2	x	3	3.3*	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures)										
Smallmouth Bass	x	x	x	x	80,190	2,330*	x	x	x	x

**White Crappie, Tims Ford Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.1	0.6	0.1	0.0	0.0	0.0	x	0.0	0.0	0.0
<b>Density</b> (trap netting (t) /electrofishing (e))*										
PSD (e)*	100	100	100	100	100	x	100	72	100	100
RSD (preferred) (e)*	73	86	100	100	100	67	33	27	67	100
CPUE (total) (t)*	*	*	*	*	*	*	0.07	0.04	0.1	0.18
CPUE $\geq$ Stock (t)*	*	*	*	*	*	*	0.06	0.01	0.0	0.01
CPUE $\geq$ MLL (10-inches) (t)*	*	*	*	*	*	*	0	0	0	0
<b>Growth</b> (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	x	x	x	x	108	77	x	101	x	x
Quality	93	92	x	x	x	x	95	99	93	x
Preferred	83	94	89	97	108	x	87	89	94	x
Memorable	83	88	90	x	x	77	x	90	90	87
<b>Mortality</b> (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
<b>Stocking</b>										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	x	12,197	7,867	x	10,200	3,752*	x	x	x	x
Angler Hours/Acre	x	1.2	0.7	x	1.0	0.4*	x	x	x	x
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	x	0.52	0.94	x	1.32	2.02	x	x	x	x
Harvest Rate (any crappie)	x	0.35	0.49	x	0.27	0.65	x	x	x	x
% Released (w hite crappie)	x	12.6	16.8	x	78.3	83.8	x	x	x	x
Mean Weight (w hite crappie)	x	1.2	*	x	0.7	1.0*	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	x	9,160	x	x	38,420	*	x	x	x	x



**Black Crappie, Tims Ford Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.1	0.4	0.5	0.0	0.0	0.2	0.1	0.1	0.2	0.1
<b>Density</b> (trap netting (t) /electrofishing (e))*										
PSD (e)*	81	100	83	89	x	x	90	83	100	91
RSD (preferred) (e)*	43	33	33	56	x	28	90	83	56	55
CPUE (total) (t)*	*	*	*	*	*	*	0.08	0.2	0.2	0.3
CPUE $\geq$ Stock (t)*	*	*	*	*	*	*	0.02	0.06	0.3	0.18
CPUE $\geq$ MLL (10-inches) (t)*	*	*	*	*	*	*	0	0	0	0
<b>Growth</b> (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	95	x	87	87	94	87	x	x	x	x
Quality	91	91	95	90	96	88	79	91	94	93
Preferred	81	87	78	80	x	82	92	80	87	80
Memorable	81	87	78	80	x	82	87	86	83	80
<b>Mortality</b> (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
<b>Stocking</b>										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	x	12,197	7,867	x	10,200	3,752*	x	x	x	x
Angler Hours/Acre	x	1.2	0.7	x	1.0	0.4*	x	x	x	x
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	x	0.52	0.94	x	1.32	2.02	x	x	x	x
Harvest Rate (any crappie)	x	0.35	0.49	x	0.27	0.65	x	x	x	x
% Released (black crappie)	x	10.7	9.6	x	66.7	71.1*	x	x	x	x
Mean Weight (black crappie)	x	0.9	0.9	x	0.85	0.7*	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	x	9,160	x	x	38,420	*	x	x	x	x

**Blacknose Crappie, Tims Ford Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.0	0.1	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.0
<b>Density</b> (trap netting (t) /electrofishing (e))*										
PSD (e)*	73	100	90	80	x	x	96	100	100	100
RSD (preferred) (e)*	36	50	50	40	19	28	64	63	63	83
CPUE (total) (t)*	*	*	*	*	*	*	0.07	0.15	0.1	0.06
CPUE ≥ Stock (t)*	*	*	*	*	*	*	0.06	0.11	0.0	0.04
CPUE ≥ MLL (10-inches) (t)*	*	*	*	*	*	*	0	0.01	0	0
<b>Growth</b> (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	89	x	101	90	92	87	76	x	x	x
Quality	102	99	89	93	x	87	89	85	96	72
Preferred	88	86	87	91	x	85	88	93	89	86
Memorable	75	x	81	93	x	82	92	83	83	76
<b>Mortality</b> (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
<b>Stocking</b>										
#	119,595	106,312	82,531	206,097	98,378	80,691	128,980	106,004	156,411	156,411
#/Acre	11.3	10.0	7.8	19.4	9.3	7.6	12.2	10.0	14.8	14.8
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	x	12,197	7,867	x	10,200	3,752*	x	x	x	x
Angler Hours/Acre	x	1.2	0.7	x	1.0	0.4*	x	x	x	x
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	x	0.52	0.94	x	1.32	2.02	x	x	x	x
Harvest Rate (any crappie)	x	0.35	0.49	x	0.27	0.65	x	x	x	x
% Released (blacknose crappie)	x	23	8.4	x	59.9	74.3*	x	x	x	x
Mean Weight (blacknose crappie)	x	1.6	1.1	x	0.9	0.8*	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	x	9,160	x	x	38,420	*	x	x	x	x

**Walleye, Tims Ford Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Age-0 CPUE	0.1	0	x	x	0.1	0.1	0.2	1.7	0.44	0.16
<b>Density</b> (gill netting)										
PSD	60	88	55	73	x	x	87.5	59.2	65.7	91.9
RSD (preferred)	10	11	11	13	16	6	9	14	7	8
CPUE (total)	2.1	4.9	3.4	7.6	3	3.5	3.2	4.1	3.8	2.1
CPUE $\geq$ Stock	1.9	4.9	3	7.4	3	3.5	3.2	3.94	3.7	2.1
CPUE $\geq$ 16-inches	0.9	3.8	1.7	3.3	2.1	1	1.8	2.05	2.1	1.7
<b>Growth</b> (gill netting)										
Length Age-1	x	16.3	x	16.3	15.9	x	16.3	14.8	15.6	16.8
Length Age-3	x	20.7	x	20.0	19.9	x	x	19.1	19.1	x
<b>Condition</b> (gill netting)										
Stock	91.0	92.0	92.0	91.0	86.0	92.0	108.6	89.0	97.2	85.8
Quality	85.0	88.0	86.0	91.0	89.0	93.0	83.1	87.0	86.4	84.9
Preferred	89.0	84.0	87.0	84.0	86.0	92.0	89.2	79.8	80.0	78.1
Memorable	x	x	x	77.0	80.0	90.0	x	x	80.5	x
<b>Stocking</b>										
#	119,125	0	130,142	69,006	77,945	152,443	117,375	115,346	179,511	117,977
#/Acre	11.0	0.0	12.0	7.0	7.4	14.4	11.1	10.9	16.9	11.1
<b>Angling Pressure</b> (creel)										
Angler Hours	x	4,192	2,787	x	4,188	2,835*	x	x	x	x
Angler Hours/Acre	x	0.4	0.3	x	0.4	0.3	x	x	x	x
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	x	0.11	0.01	x	0.16	0.11	x	x	x	x
Harvest Rate (intended)	x	0.04	0.01	x	0.14	0.11	x	x	x	x
% Released	x	50.3	0	x	15.5	0*	x	x	x	x
Mean Weight	x	2.60	2.50	x	2.37	2.99*	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Walleye	x	18,910	x	x	18,010	5,980*	x	x	x	x

**Striped Bass, Tims Ford Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Age-0 CPUE	*	*	*	*	*	*	0.2	0.11	x	x
<b>Density</b> (gill netting)										
PSD	11	63	x	62	75	100	100	14	x	100
RSD (preferred)	0	0	x	x	*	100	x	x	x	x
CPUE (total)	1.1	0.3	1	1	0.4	0.1	0.3	0.5	x	0.2
CPUE $\geq$ Stock	1.1	0.5	1	1	0.4	0.1	0.1	0.39	x	0.2
CPUE $\geq$ 15-inches	0.6	x	0.5	x	0.1	0.1	0.1	0.11	x	0
<b>Growth</b> (gill netting)										
Length Age-2	19.4	21.6	x	20.0	22.0	x	x	20.3	x	x
Length Age-3	x	24.8	x	x	23.5	x	24.8	x	x	x
<b>Condition</b> (gill netting)										
Stock	90.0	93.0	95.0	92.0	74.0	x	x	82.9	x	94.4
Quality	64.0	84.0	x	83.0	76.0	101.0	95.1	x	x	x
Preferred	x	x	x	x	x	x	x	x	x	x
Memorable	*	*	*	*	*	*	x	x	x	x
<b>Stocking</b>										
#	58,559	87,602	69,577	49,486	57,056	29,952	30,184	43,713	29,470	15,538
#/Acre	5.5	8.3	6.6	4.7	5.4	2.8	2.8	4.1	2.8	1.5
<b>Angling Pressure</b> (creel)										
Angler Hours	x	5,003	5,962	x	11,142	3,036*	x	x	x	x
Angler Hours/Acre	x	0.5	0.6	x	1.1	0.3	x	x	x	x
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	x	0.25	0.10	x	0.11	0.25	x	x	x	x
Harvest Rate (intended)	x	0.06	0.06	x	0.09	0.11	x	x	x	x
% Released	x	86.3	47.4	x	40.7	86.0*	x	x	x	x
Mean Weight	x	6.70	7.13	x	5.32	4.30	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Striped Bass	x	x	x	x	42,120	x	x	x	x	x

**Hybrid (Cherokee) Bass, Tims Ford Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Age-0 CPUE	*	*	*	*	*	*	0.72	0.78	0.28	x
<b>Density</b> (gill netting)										
PSD	94	87	100	78	89	x	80.6	73.4	92.2	100
RSD (preferred)	14	87	100	75	72	98	69	47	59	88
CPUE (total)	4	10	4	2	6	2	3.5	2.62	2.9	1.9
CPUE $\geq$ Stock	4	10	4	2	6	2	3.44	2.5	2.8	1.9
CPUE $\geq$ 15-inches	3	8	4	2	3	2	2.4	1.17	1.6	1.7
<b>Growth</b> (gill netting)										
Length Age-2	x	19.4	x	19.7	x	x	19.8	16.2	20.4	19.2
Length Age-3	x	20.4	x	22.2	21.3	x	20.9	14.7	21.0	19.3
<b>Condition</b> (gill netting)										
Stock	89.0	91.0	x	88.0	89.0	98.0	85.9	98.6	92.4	x
Quality	83.0	x	x	97.0	97.0	92.0	85.9	90.1	89.2	93.7
Preferred	85.0	86.0	91.0	90.0	93.0	99.0	83.7	86.4	88.7	95.2
Memorable	85.0	87.0	86.0	87.0	90.0	98.0	87.7	79.0	92.3	84.9
<b>Stocking</b>										
#	58,738	28,214	0	51,918	34,723	24,282	16,800	25,150	29,282	77,047
#/Acre	6.0	3.0	0.0	5.0	3.3	2.3	1.6	2.4	2.8	7.3
<b>Angling Pressure</b> (creel)										
Angler Hours	x	665	789	x	3,218	1,868*	x	x	x	x
Angler Hours/Acre	x	0.1	0.1	x	0.3	0.2*	x	x	x	x
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	x	0.54	0.36	x	0.21	0.91	x	x	x	x
Harvest Rate (intended)	x	0.03	0.30	x	0.13	0.12	x	x	x	x
% Released	x	84.9	29.1	x	35.3	93.1*	x	x	x	x
Mean Weight	x	5.17	4.06	x	4.20	3.7*	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Cherokee Bass	x	x	x	x	33,430	1,330*	x	x	x	x

**2015 Habitat Enhancement - Tims Ford Reservoir**

				Quantity	
Type of Work	Details		New		Renovated
Planted	Cypress Trees		283 Trees, 2 Sites		
Rebrushed	Cedar Trees to Established Bouy Sites		216 Trees, 18 Sites		
Checked and Refurbished	Spaw ning Benches to Established Sites		43		
Rebrushed					
Added					
Installed					

**2015 Water Quality Monitoring - Tims Ford Reservoir**

Parameter	Sampling Period	Water Quality
Temperature	July to August	normal
Dissolved Oxyged	July to August	normal

## Woods Reservoir

### Description

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**Area (acres):** 3,600      **Mean Depth (feet):**      **Shoreline (miles):** 65

**Counties:** Franklin and Coffee

**Full Pool Elevation (feet-msl):** 960      **Winter Pool Elevation (feet-msl):** 957

**Dam Completion:** 1952

### Summary:

Over the past six years, yearly creel surveys have not been conducted on Woods Reservoir. From 2006 to 2009, three yearly creel surveys (two concurrent) were conducted. Creel data collected during this time period indicated a 37.9% increase in the number of angler trips, with a resultant increase in angler hours of approximately 39.2%. The increases in angler trips and angler effort from 2006 to 2009 were the results of consecutive crappie year classes recruiting successfully into the harvestable length range, and a two-fold increase in effort for largemouth bass.

Woods Reservoir has two primary fisheries: a crappie fishery and a black bass fishery. The crappie fishery is comprised of a black crappie fishery and a white crappie fishery, while the black bass fishery is comprised of a largemouth bass fishery and a smallmouth bass fishery. As a result of marginal habitat, the smallmouth bass fishery is extremely limited. Based on the result of the last creel survey conducted in 2009, largemouth bass accounted for approximately 66.8% of directed angler effort. The density estimate of stock length largemouth bass collected during 2015 electrofishing samples rated as "average." Based on the substock abundance estimate of 12 fish/hour, largemouth bass recruitment was rated as "moderate." Compared to the substock abundance estimates from the previous ten years, the 2015 value was the third highest documented, and was 33.3% lower than the highest value documented (2014). Since 2012, PSD values have indicated the largemouth population to be in balance, mainly as a result of an increased abundance of largemouth bass  $\geq 15.0$  inches. The increased abundance of largemouth bass  $\geq 15.0$  inches over this time period has been the result of anglers self-imposing a minimum length limit, and not an enacted law. Length frequency data and associated age data indicated the continued existence of a quality largemouth bass population. Additional age data, which will be collected in 2016, will be utilized to confirm that acceptable growth and age structure exists in the largemouth bass population.

Rocky substrate, which is the preferred habitat of smallmouth bass, is limited to a few "points" prior to entering coves in the lower end of the lake. As a result of limited habitat, smallmouth bass persist at a minimal level of abundance. Consequently, directed angler effort for smallmouth bass is extremely low compared to largemouth bass. Supplemental stockings did occur in the 1980's and 1990's, but post stocking evaluation indicated that the stockings did not enhance the smallmouth bass fishery of Woods Reservoir.

The black crappie and white crappie fisheries combined (hereafter crappie fishery) comprised the second most popular fishery on Woods Reservoir. Directed effort for crappie was approximately 33.2% of the total angler directed effort. Two very strong consecutive year classes (2010-2011) were followed by two consecutive moderate year classes (2012-2013). In 2014 and 2015, strong consecutive year classes were documented once again. As a result, the crappie fishery is characterized by excellent abundance,

size structure, and age structure. Over the past ten years, only two weak year classes were detected (2006 and 2009) in the Woods Reservoir crappie fishery. In both years, juvenile recruitment rated as low (2006 - 0.8 fish / net night and 2009 - 0.2 fish / net night). The effect of variable recruitment has remained fairly uniform, regardless of crappie species. Angler effort, as calculated from the most recent creel data (2006, 2007, and 2009) indicated that over the four year period, angler hours increased only slightly (by 12.9%). Based on the current status of the crappie fishery, anglers have been satisfied with the 10.0 inch minimum length limit, have been experiencing higher catch rates, and have been harvesting crappie at a higher rate than normal above the minimum length limit.

Habitat enhancements by the reservoir crew have been extensive over the previous eleven years on Woods Reservoir. Bald cypress trees were planted at three different areas to aid in shoreline stabilization and to provide nursery habitat as these trees mature. Pine trees are regularly added to both marked shallow and marked deep water sites to provide attractors for concentrating adult fish. Stake beds, using wooden stakes, have been installed to provide fishing habitat for crappie anglers. Artificial fish attractors have also periodically been installed to benefit bass and sunfish anglers. As a result of limited winter drawdown, spawning benches have not been placed into Woods Reservoir. The most recent habitat work, which was completed during the winter of 2015, was the addition of four "corrugated pipe" fish attractors. Also, forty bald cypress trees were added to one of the three initial planting areas. A total of twenty weighted cedar trees were added to one deep water fish attractor area. Extensive habitat work (including rebrushing of all marked sites, cypress tree plantings, and the addition of stake beds and fabricated attractors) will be conducted in 2016.

### **Lakewide Angling Summary, Woods Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	33,948	50,715	x	55,861	x	x	x	x	x	x
Angler Hours Per Acre	9.0	14.0	x	15.0	x	x	x	x	x	x
Angler Trips	7,400	10,992	x	11,914	x	x	x	x	x	x
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	x	x	x	287,490	x	x	x	x	x	x



**Black Bass, Woods Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	14,309	24,130	x	33,407	x	x	x	x	x	x
(hrs/acre)	3.9	6.6	x	9.1	x	x	x	x	x	x
Any Black Bass (hrs)	14,125	24,004	x	32,425	x	x	x	x	x	x
(hrs/acre)	3.9	6.6	x	8.9	x	x	x	x	x	x
Largemouth Bass (hrs)	184	126	x	982	x	x	x	x	x	x
(hrs/acre)	0.1	0.0	x	0.3	x	x	x	x	x	x
Smallmouth Bass (hrs)	x	x	x	x	x	x	x	x	x	x
(hrs/acre)	x	x	x	x	x	x	x	x	x	x
Spotted Bass (hrs)	x	x	x	x	x	x	x	x	x	x
(hrs/acre)	x	x	x	x	x	x	x	x	x	x
<b>Tournaments (all black bass)</b>										
# Tournaments (BITE)	x	x	x	x	x	x	x	x	x	x
Pounds/Angler Day (BITE)	x	x	x	x	x	x	x	x	x	x
Bass/Angler Day (BITE)	x	x	x	x	x	x	x	x	x	x
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	x	x	x	207,980	x	x	x	x	x	x
Any Black Bass	x	x	x	204,760	x	x	x	x	x	x
Largemouth Bass	x	x	x	3,220	x	x	x	x	x	x
Smallmouth Bass	x	x	x	x	x	x	x	x	x	x
Spotted Bass	x	x	x	x	x	x	x	x	x	x

**Largemouth Bass, Woods Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	14	7	9	8	0	10	7	10	18	12
<b>Density</b> (electrofishing)										
PSD	73	60	89	73	29	25	56	54	68	69
RSD (preferred)	28	16	67	21	11	16	*	24	29	x
CPUE (total)	52	62	60	60	67	42	55	60	79	75
CPUE $\geq$ Stock	38	56	51	52	31	31	44	50	61	62
CPUE $\geq$ (15-inches)	11	9	11	11	5	5	7	12	17	14
<b>Growth</b> (electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	90	87	87	83	83	83	84	81	81	85
Quality	89	87	83	81	85	81	84	83	84	86
Preferred	97	89	85	90	82	84	89	95	95	97
Memorable	109	75	103	86	89	79	78	95	99	99
<b>Mortality</b> (electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
<b>Stocking</b>										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.77	0.2	x	0.64	x	x	x	x	x	x
Harvest Rate (intended)	0	0	x	0.05	x	x	x	x	x	x
% Released	82.7	85.1	x	83.5	x	x	x	x	x	x
Mean Weight	1.4	1.5	x	1	x	x	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures)										
Largemouth Bass	x	x	x	3,220	x	x	x	x	x	x

**Smallmouth Bass, Woods Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	*	*	*	*	*	*	x	0	1	2
<b>Density</b> (electrofishing)										
PSD	*	*	*	*	*	*	17	29	38	40
RSD (preferred)	*	*	*	*	*	*	x	29	13	x
CPUE (total)	*	*	*	*	*	*	4	3	7	8
CPUE $\geq$ Stock	*	*	*	*	*	*	2	2	5	7
CPUE $\geq$ MLL (18-inches)	*	*	*	*	*	*	0	0	0	0
<b>Growth</b> (electrofishing)										
Length Age-1	*	*	*	*	*	*	x	x	x	x
Length Age-3	*	*	*	*	*	*	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	*	*	*	*	*	*	x	78	84	82
Quality	*	*	*	*	*	*	80	x	78	85
Preferred	*	*	*	*	*	*	x	87	68	87
Memorable	*	*	*	*	*	*	x	x	81	x
<b>Mortality</b> (electrofishing)										
Total Mortality	*	*	*	*	*	*	x	x	x	x
<b>Stocking</b>										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	x	x	x	x	x	x	x	x	x	x
Harvest Rate (intended)	x	x	x	x	x	x	x	x	x	x
% Released	*	*	x	*	x	x	x	x	x	x
Mean Weight	*	*	x	*	x	x	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures)										
Smallmouth Bass	x	x	x	x	x	x	x	x	x	x

**White Crappie, Woods Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.3	0.5	2.3	0.2	3.0	6.0	2.3	1.3	7.0	2.3
<b>Density</b> (trap netting (t) /electrofishing (e))*										
PSD (e)*	98	100	100	100	*	100	75	100	100	100
RSD (preferred) (e)*	90	47	100	76	*	100	*	48	91	x
CPUE (total) (t)*	*	*	*	*	*	*	2.54	1.42	7.3	2.4
CPUE $\geq$ Stock (t)*	*	*	*	*	*	*	0.27	0.17	0.0	0.06
CPUE $\geq$ MLL (10-inches) (t)*	*	*	*	*	*	*	0.19	0.04	0.04	0.02
<b>Growth</b> (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	10.47	x	x
<b>Condition</b> (spring electrofishing)										
Stock	97	x	x	x	*	88	91	x	x	x
Quality	92	101	95	99	*	88	84	96	96	100
Preferred	94	92	97	92	*	x	89	94	93	92
Memorable	90	78	92	86	*	x	x	x	92	65
<b>Mortality</b> (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	72	x	x
<b>Stocking</b>										
#	44,482	0	0	27,019	0	0	0	0	0	0
#/Acre	12.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	14,451	18,926	x	16,605	x	x	x	x	x	x
Angler Hours/Acre	4.0	5.2	x	4.5	x	x	x	x	x	x
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	0.79	0.75	x	0.6	x	x	x	x	x	x
Harvest Rate (any crappie)	0.51	0.39	x	0.34	x	x	x	x	x	x
% Released (w white crappie)	7.9	18.3	x	58.3	x	x	x	x	x	x
Mean Weight (w hite crappie)	0.8	0.8	x	0.9	x	x	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	x	x	x	67,580	x	x	x	x	x	x

**Black Crappie, Woods Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.5	1.1	4.0	0.0	4.0	1.4	0.2	0.7	4.4	1.7
<b>Density</b> (trap netting (t) /electrofishing (e))*										
PSD (e)*	100	100	100	100	*	46	31	100	100	100
RSD (preferred) (e)*	50	29	100	64	*	x	13	*	50	x
CPUE (total) (t)*	*	*	*	*	*	*	0.29	0.81	4.4	1.77
CPUE $\geq$ Stock (t)*	*	*	*	*	*	*	0.06	0.1	0.1	0.06
CPUE $\geq$ MLL (10-inches) (t)*	*	*	*	*	*	*	0	0	0.04	0.02
<b>Growth</b> (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	8.62	x	x
<b>Condition</b> (spring electrofishing)										
Stock	x	x	x	x	*	86	86	x	x	x
Quality	97	99	94	96	*	x	79	89	87	x
Preferred	91	91	90	86	*	x	77	x	86	86
Memorable	x	85	62	86	*	x	x	x	x	x
<b>Mortality</b> (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	69	x	x
<b>Stocking</b>										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	14,451	18,926	x	16,605	x	x	x	x	x	x
Angler Hours/Acre	4.0	5.2	x	4.5	x	x	x	x	x	x
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	0.79	0.75	x	0.6	x	x	x	x	x	x
Harvest Rate (any crappie)	0.51	0.39	x	0.34	x	x	x	x	x	x
% Released (black crappie)	4.4	4.4	x	51.4	x	x	x	x	x	x
Mean Weight (black crappie)	0.9	0.8	x	0.8	x	x	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	x	x	x	67,580	x	x	x	x	x	x

**Blacknose Crappie, Woods Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.0	0.1	0.2	0.0	0.3	0.4	x	0.1	0.4	0.1
<b>Density</b> (trap netting (t) /electrofishing (e))*										
PSD (e)*	100	100	100	100	*	x	0	100	100	100
RSD (preferred) (e)*	40	0	93	33	*	25	*	*	54	x
CPUE (total) (t)*	*	*	*	*	*	*	x	0.06	0.4	0.1
CPUE $\geq$ Stock (t)*	*	*	*	*	*	*	x	0.06	0.0	0
CPUE $\geq$ MLL (10-inches) (t)*	*	*	*	*	*	*	x	0	0.04	0
<b>Growth</b> (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
<b>Condition</b> (spring electrofishing)										
Stock	x	x	x	x	*	98	88	x	x	x
Quality	101	98	98	x	*	93	x	83	90	99
Preferred	x	x	x	90	*	78	x	x	85	93
Memorable	x	x	x	16	*	x	x	x	x	86
<b>Mortality</b> (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
<b>Stocking</b>										
#	0	0	0	126,377	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	14,451	18,926	x	16,605	x	x	x	x	x	x
Angler Hours/Acre	4.0	5.2	x	4.5	x	x	x	x	x	x
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	0.79	0.75	x	0.6	x	x	x	x	x	x
Harvest Rate (any crappie)	0.51	0.39	x	0.34	x	x	x	x	x	x
% Released (blacknose crappie)	5.7	20.4	x	43.5	x	x	x	x	x	x
Mean Weight (blacknose crappie)	0.9	0.8	x	0.9	x	x	x	x	x	x
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	x	x	x	67,580	x	x	x	x	x	x

**2015 Habitat Enhancement - Woods Reservoir**

				Quantity	
Type of Work	Details		New		Renovated
Planted	Cypress Trees to Existing Sites		40		
Rebrushed	Cedar Trees around existing sites		20		
Checked and Refurbished					
Rebrushed					
Added	Corrugated Pipe Structure		4		
Installed					

**2015 Water Quality Monitoring - Woods Reservoir**

Parameter	Sampling Period	Water Quality
Temperature	July to August	normal
Dissolved Oxygen	July to August	normal

## **REGION 3**



### Center Hill Reservoir (Annual Report 2015)

#### Description

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**Area (acres):** 18,220      **Mean Depth (feet):** 73      **Shoreline (miles):** 415

**Counties:** Dekalb, Putnam, Warren, White

**Full Pool Elevation (feet-msl):** 648      **Winter Pool Elevation (feet-msl):**

**Dam Completion:** 1948

#### Summary:

In 2008, a drawdown was instituted on Center Hill Reservoir to facilitate repair to Center Hill Dam. The completion of this ongoing project is projected to be complete around the years 2018-2019, although the completion date has moved out from original predictions more than once. The lake levels continue to be operated between elevation 630 feet above mean sea level (MSL) in the summer and no lower than elevation 618-MSL during the late fall and early winter. Normal full pool level is 648 feet-MSL. During the years of this drawdown, there have been lots of increases in terrestrial vegetation and small trees (i.e. willow bushes) along the shoreline. This should create great habitat for various fish species, especially juvenile fish upon the initial fill of the reservoir. This would be a good time to stock greater numbers of traditionally stocked fish into the reservoir as well as other available gamefish that inhabit Center Hill Reservoir.

**Largemouth bass (LMB):** The largemouth bass fishery is stable and should provide good fishing opportunities for 2016. According to the roving creel surveys, angling pressure for black bass (largemouth, smallmouth and spotted bass) has remained consistent for the last ten years with an average effort of 5.43 hours/acre expended in pursuit of “black bass”. Electrofishing surveys were conducted in 2015 and are scheduled to be conducted again in 2017 per the bi-annual electrofishing work schedule. In 2009, age one largemouth bass CPUE via electrofishing was at a higher rate (3.4lmb/hour) than experienced over the previous ten years. The overall CPUE (lmb/hr.) for largemouth bass collected via electrofishing in 2015 was 25.8 lmb/hr, the highest in the past ten years. The CPUE for lmb/hour  $\geq$  the MLL of 15” was above the 10 year mean at 13.5 lmb/hour for 2015. Condition factors (Wr) for all size ranges of largemouth bass looked satisfactory as well which has been consistent for the past ten years. Despite the current extended drawdown, spawning success for largemouth bass in 2015 looks good according to the summer seining samples which were the second highest in the past ten years with a realized CPUE of 1.4 lmb/seine haul.

**Smallmouth bass (SMB):** Smallmouth bass fishing should be good for the 2016 fishing season as well. Center Hill offers great SMB habitat in miles of rocky shore line, points and bluff areas, similar to Dale Hollow in several regards. A targeted electrofishing survey for SMB was last done in 2012 which showed comparable CPUE's to SMB catch rates (22.3 smb/hr) at similar targeted SMB collections at Dale Hollow Reservoir. Hopefully, once the reservoir is back to normal full pool elevations following completion of the dam repairs, favorable spawning conditions will yield even better year class strengths which will hopefully recruit to a harvestable size. A targeted sample is scheduled for early spring of 2016 for SMB.

**Spotted bass (SPB):** Because Center Hill Reservoir has consistently harbored a good population of spotted bass and continues to do so, anglers in pursuit of these fish will find ample opportunity here for good angling success. Optimum SPB habitat is available at Center Hill (i.e. rocky banks, points, bluffs,

etc.) For many years, Center Hill Reservoir was the host of the state record spotted bass of 5lb 8oz. (this record is currently held by a 6lb 1oz spotted bass caught in Chickamauga Reservoir). The CPUE for 2013 age 1 (substock) SPB collected via electrofishing were the lowest recorded in the past ten years indicating a poor spawn which could be a result of the current extended drawdown at Center Hill Reservoir. The mid-summer seining surveys in 2015 were however the 3<sup>rd</sup> highest recorded (9.8 spb/seine haul) in the past ten years hopefully signaling a rebound in spawning success. Condition factors (Wrs) for spotted bass look good currently and better than smallmouth bass collected during this same period at Center Hill.

**Crappie:** White crappie make up a small percentage of the overall crappie population in Center Hill Reservoir and are more oriented towards the upper end of the reservoir. Black crappie (including “blacknose” crappie) represent the majority of the crappie present in Center Hill Reservoir. Anglers pursuing crappie should expect to find good numbers of available crappie at Center Hill thanks to an annual stocking program of blacknose crappie (BNC). Low reproductive success occurring on an annual basis led to the initiation of a “blacknose” crappie stocking program here in 1990, the first crappie project of its kind in the state of Tennessee. There were 129,984 blacknose crappie fingerlings stocked into Center Hill in 2015 equaling 7.1/acre. Angler catch rates for “any” crappie at Center Hill in 2015 were 0.24 crappie/hour which is the second lowest catch rate in the past ten years next to the year 2013 (0.83 crappie/hour). Angling pressure for crappie according to annual roving creel surveys was also the second lowest in 2015 at 0.73 hrs. expended/acre. The year 2013 was very similar in angling pressure (0.74 hrs/acre). The average weight of crappie harvested in 2015 was 1.06 lbs. Anglers spent an estimated \$40,120 on trip expenditures in 2015 in pursuit of crappie at Center Hill.

**Bluegill:** Angler catch rates for bluegill are near the current ten year average. Good bluegill fishing should be anticipated for sunfish anglers on Center Hill Reservoir. CPUE for the 2015 mid-summer seining samples were average at 3.0 bluegill/seine haul.

**Walleye:** Center Hill Reservoir continues to be a brood source for walleye for several state hatchery facilities. These brood walleye are collected in mid-March in the upper reach of the reservoir in the “blue hole” area near Rock Island via electrofishing. Considerable thought should be given to maintaining appropriated stocking regimes to maintain this reliable source of brood walleye. Catch rates (0.17 walleye/hour) for walleye during 2015 were near the five year average according to roving creel surveys. Walleye continue to be stocked into Center Hill Reservoir on an annual basis. There were 182,666 walleye fingerlings stocked in 2015 (10/acre). Based on these facts and limited natural recruitment, walleye anglers should anticipate stable, good fishing for walleye at Center Hill. Expenditures by anglers in pursuit of walleye for 2015 were \$111,260 with an estimated total value of anglers including consumer surplus of \$177,480. The average weight for harvested walleye in 2015 was 2.44 lbs. from Center Hill.

**Catfish:** Catch rates for catfish are stable based on 10 year averages. According to creel surveys \$22,720 was spent on trip expenditures in pursuit of “all” catfish in 2015. Center Hill Reservoir is not known as a top destination for catfish angling when compared to other reservoirs in Region 3. Both channel and flathead catfish were recorded during annual roving creel surveys in 2015 at Center Hill.

### Angler Attitude Surveys

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management

recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. In an effort to accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions (see questionnaire in Appendix) in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, avg size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often times, minority user groups succeed in representing the sentiment of the angling public when actually it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

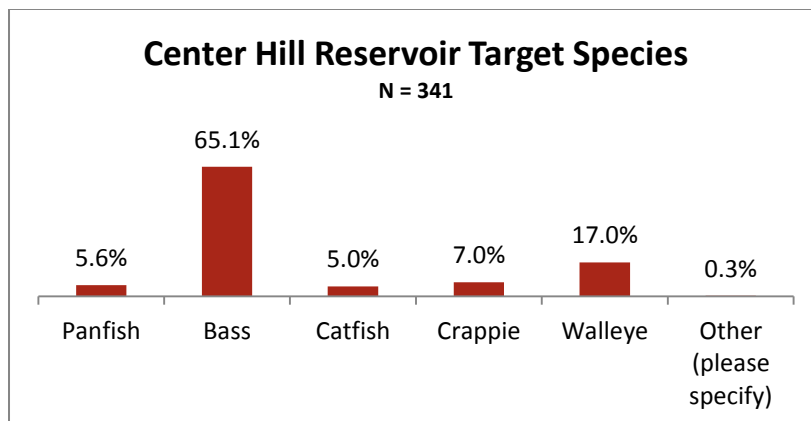
We sampled our angling public with attitude surveys again in 2015 on the four reservoirs in Region 3 that creel surveys were conducted (Center Hill, Chickamauga, Dale Hollow, and Watts Bar Reservoirs). Overall “approval” of Region 3 reservoirs in this 2015 survey is very favorable at the current time according to these 2015 surveys. We feel confident that this summary of our “angler attitudes” will once again provide insight to how these particular reservoirs are evaluated by our angling public. This type information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of our creel clerks (Danny Stone, Tim Poole) and the Region 3 reservoir fisheries crew.

Results from the Angler Attitude Survey for Center Hill are as follows:

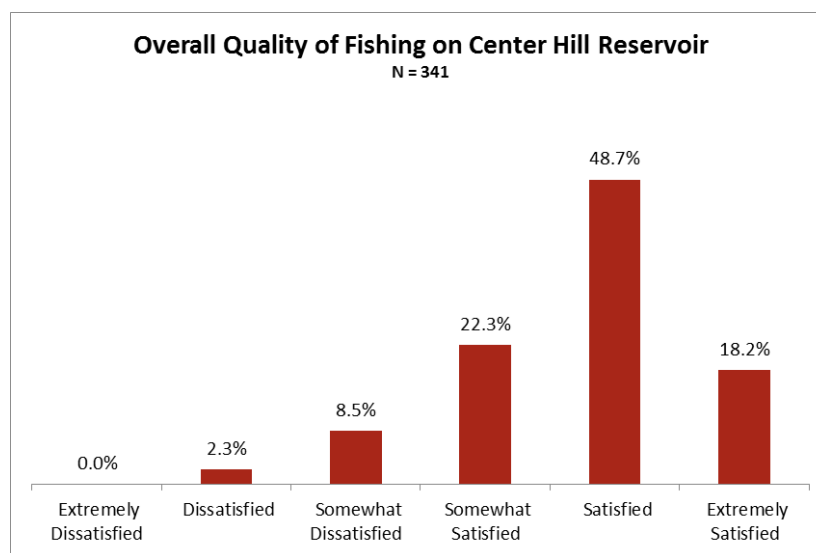
There were a total of 341 anglers who were fishing at Center Hill Reservoir interviewed by a creel clerk for the angler attitude survey in 2015. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

As the graph below indicates, the most targeted species of fish by anglers on Center Hill was “bass” (65.1%) with walleye being a distant second (17.0%).

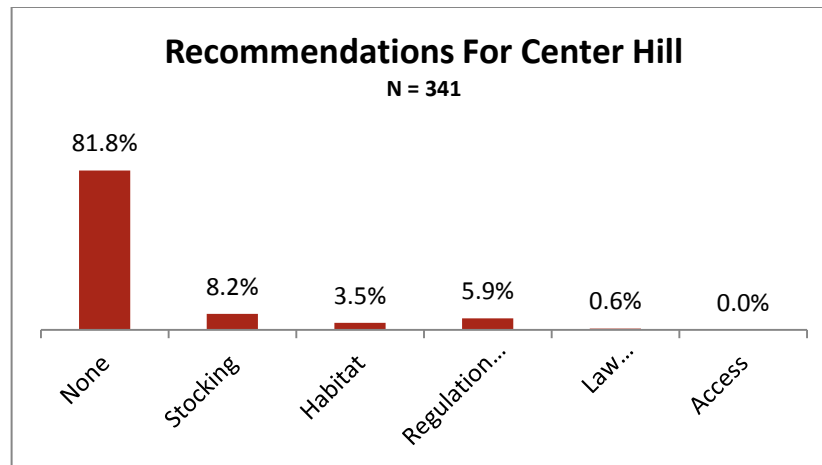


These surveys also revealed that fishermen who identified “Bass” (n=222) as their primary target species, 90% of those also fished bass tournaments. On average, these bass tournament fishermen at Center Hill Reservoir fished an average of 9.2 bass tournaments/year.

As the graph below depicts anglers expressed a high satisfaction rating (89.2%) overall when asked about the “overall quality of fishing on Center Hill Reservoir”.



According to the graph below, when anglers who fish Center Hill were asked if they had any recommendations for the overall management of Center Hill Reservoir the large majority (81.8%) had none indicating that all was “fine”. Stocking was the category with the most recommendations. Of these 8.2% of anglers who expressed concern for stocking, 60.7% of these suggestions were in favor of stocking more walleye. Currently, walleye are stocked in Center Hill on an annual basis.



Overall, the angler attitudes for those fishing at Center Hill are ones that exhibit a high approval for the current fish management of this reservoir by TWRA.

**Lakewide Angling Summary**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	296,236	277,219	322,409	317,969	279,400	-	264,973	205,427	-	171,352
Angler Hours Per Acre	19.8	15.2	17.6	17.4	15.3	-	14.6	11.4	-	9.4
Angler Trips	19,198	52,084	58,367	58,930	48,768	-	45,881	37,436	-	31,542
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	999,040	977,450	1,446,270	995,560	916,980	-	1,051,260	780,460	-	808,780

**Black bass, Center Hill Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	140,142	123,923	177,713	159,565	151,328	-	132,966	104,049	-	98,918
(hrs/acre)	7.69	6.80	9.75	8.76	8.31	-	7.30	5.71	-	5.43
Any Black Bass (hrs)	126,474	115,056	160,682	149,123	131,316	-	121,607	88,620	-	88,248
(hrs/acre)	6.94	6.31	8.82	8.18	7.21	-	6.67	4.86	-	4.84
Largemouth Bass (hrs)	-	-	-	-	418	-	271.00	-	-	4,581
(hrs/acre)	-	-	-	-	0.02	-	0.01	-	-	0.25
Smallmouth Bass (hrs)	3,149	3,392	5,124	3,410	9,298	-	7,475	7,923	-	4,389
(hrs/acre)	0.17	0.19	0.28	0.19	0.51	-	0.41	0.44	-	0.24
Spotted Bass (hrs)	10,519	5,475	11,907	7,032	10,296	-	3,613	7,506	-	1,700
(hrs/acre)	0.58	0.30	0.65	0.39	0.57	-	0.20	0.41	-	0.09
<b>Tournaments (all black bass)</b>										
# Tournaments (BITE)	-	1	-	-	-	-	-	-	-	-
Pounds/Angler Day (BITE)	-	2.7	-	-	-	-	-	-	-	-
Bass/Angler Day (BITE)	-	1.0	-	-	-	-	-	-	-	-
Tournament Angler Hrs/Acre (creel)	-	-	-	-	-	-	-	-	-	-
Tournament Catch Rate (creel)	0.22	0.24	0.49	0.29	0.47	-	0.45	0.33	-	0.84
Non-Tournament Catch Rate (creel)	0.52	0.61	0.56	0.69	0.56	-	0.52	0.52	-	0.41
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	\$605,700	\$540,650	1,697,830	\$621,280	\$1,046,670	-	\$653,830	\$441,440	-	\$544,300
Any Black Bass	\$555,630	\$507,070	1,553,590	\$582,760	\$922,580	-	\$596,320	\$369,440	-	\$496,070
Largemouth Bass	-	-	-	-	\$3,880	-	\$2,190	-	-	\$19,420
Smallmouth Bass	\$13,750	\$8,530	\$54,990	\$16,990	\$59,210	-	\$46,880	\$39,010	-	\$23,070
Spotted Bass	\$36,320	\$25,050	\$89,250	\$21,530	\$61,000	-	\$8,440	\$32,990	-	\$5,740

**Largemouth Bass, Center Hill Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	-	0.00	-	3.40	-	0.20	-	1.80	-	0.60
CPUE (mid-summer seine)	1.10	0.40	0.60	0.40	0.60	1.50	0.40	0.50	0.30	1.40
<b>Density (spring electrofishing)</b>										
PSD	-	98	-	92	-	90	-	90	-	90
RSD (preferred)	-	85.0	-	74.0	-	43.0	-	68	-	56
CPUE (total)	-	12.2	-	15.6	-	18.0	-	20.0	-	25.8
CPUE $\geq$ Stock	-	12.2	-	12.2	-	17.8	-	18.2	-	24.1
CPUE $\geq$ MLL (15-inches)	-	10.4	-	9.0	-	7.6	-	15.0	-	13.5
<b>Growth (spring electrofishing)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (spring electrofishing)</b>										
Stock	-	100.5	-	93.1	-	125.1	-	102.9	-	97.6
Quality	-	96.1	-	99.2	-	94.9	-	102.6	-	96.1
Preferred	-	95.5	-	95.6	-	95.1	-	96.7	-	91.3
Memorable	-	-	-	97.7	-	89.5	-	91.3	-	89.2
<b>Mortality (spring electrofishing)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate, num./hr (intended)	N/A	N/A	N/A	N/A	0.00	-	0.53	-	-	0.13
Catch Rate, num./hr (any black bass)	0.49	0.58	0.56	0.56	0.54	-	0.56	0.52	-	0.55
Harvest Rate, num./hr (any black bass)	0.18	0.22	0.19	0.19	0.16	-	0.16	0.17	-	0.11
% Released	71.1%	77.4%	73.9%	86.2%	81.3%	-	66.6%	82.6%	-	84.2%
Mean Weight	3.08	2.80	2.99	3.02	3.52	-	2.83	2.65	-	2.78

**Smallmouth Bass, Center Hill Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	-	0.00	-	1.60	-	-	-	-	-	0.62
CPUE (mid-summer seine)	0.30	0.40	1.30	0.30	0.60	0.10	0.00	0.10	0.30	1.40
<b>Density (spring electrofishing)</b>										
PSD	-	61	-	29	-	-	-	-	-	78
RSD (preferred)	-	30.0	-	26.0	-	-	-	-	-	20.0
CPUE (preferred)	-	-	-	1.8	-	-	-	-	-	1.0
CPUE (total)	-	11.2	-	8.6	-	3.4	-	0.6	-	8.9
CPUE $\geq$ Stock	-	11.2	-	7.0	-	-	-	-	-	8.3
CPUE $\geq$ Preferred	-	-	-	1.8	-	-	-	-	-	1.7
CPUE $\geq$ MLL (18-inches)	-	2.0	-	-	-	-	-	-	-	0.4
<b>Growth (spring electrofishing)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (spring electrofishing)</b>										
Stock	-	-	-	96.2	-	-	-	-	-	93.3
Quality	-	-	-	91.3	-	-	-	-	-	85.5
Preferred	-	-	-	90.5	-	-	-	-	-	85.1
Memorable	-	-	-	80.8	-	-	-	-	-	80.4
<b>Mortality (spring electrofishing)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate, num./hr (intended)	0.04	0.09	0.10	0.29	0.27	-	0.30	0.40	-	0.74
Catch Rate, num./hr (any black bass)	0.49	0.58	0.56	0.56	0.54	-	0.56	0.52	-	0.55
Harvest Rate, num./hr (any black bass)	0.18	0.22	0.19	0.19	0.00	-	0.04	0.17	-	0.11
% Released	71.1%	77.4%	73.9%	83.6%	94.1%	-	92.4%	87.9%	-	94.6%
Mean Weight	3.08	2.80	2.99	2.37	3.11	-	3.48	3.22	-	3.37



**Smallmouth Bass (Targeted), Center Hill Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	1.00	-	-	-	-	-	0.00	-	-	-
<b>Density</b> (electrofishing)										
PSD	57	-	-	-	-	-	87	-	-	-
RSD (preferred)	42.0	-	-	-	-	-	58.7	-	-	-
CPUE (preferred)	-	-	-	-	-	-	1.8	-	-	-
CPUE (total)	11.1	-	-	-	-	-	22.3	-	-	-
CPUE $\geq$ Stock	10.0	-	-	-	-	-	22.3	-	-	-
CPUE $\geq$ Preferred	2.5	-	-	-	-	-	13.1	-	-	-
CPUE $\geq$ MLL (18-inches)	0.1	-	-	-	-	-	2.8	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	84.1	-	-	-	-	-	87.2	-	-	-
Quality	97.1	-	-	-	-	-	85.7	-	-	-
Preferred	89.9	-	-	-	-	-	88.0	-	-	-
Memorable	81.0	-	-	-	-	-	79.8	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-

**Spotted Bass, Center Hill Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	-	2.2	-	7.6	-	2.8	-	0.6	-	2.3
CPUE (mid-summer seine)	12.0	7.8	4.1	1.1	6.3	6.6	0.4	21.4	7.6	9.8
<b>Density (spring electrofishing)</b>										
PSD	-	63.0	-	41.0	-	63.0	-	56.0	-	58.6
RSD (preferred)	-	18.0	-	12.0	-	24.0	-	16.0	-	8.6
CPUE (total)	-	37.0	-	59.0	-	35.0	-	11.0	-	43.5
CPUE $\geq$ Stock	-	29.2	-	51.4	-	32.2	-	10.6	-	41.2
<b>Growth (spring electrofishing)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (spring electrofishing)</b>										
Stock	-	109.5	-	107.6	-	116.8	-	114.5	-	105.7
Quality	-	102.7	-	105.0	-	105.1	-	111.5	-	98.0
Preferred	-	101.7	-	103.7	-	103.4	-	98.4	-	91.3
<b>Mortality (spring electrofishing)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate, num./hr (intended)	0.75	0.53	0.87	0.95	0.76	-	0.48	0.70	-	0.08
Catch Rate, num./hr (any black bass)	0.49	0.58	0.56	0.56	0.54	-	0.56	0.52	-	0.55
Harvest Rate, num./hr (any black bass)	0.18	0.22	0.19	0.19	0.45	-	0.29	0.17	-	0.11
% Released	71.1%	77.4%	73.9%	60.0%	62.2%	-	56.4%	54.8%	-	70.2%
Mean Weight	3.08	2.80	2.99	1.52	1.49	-	1.23	1.63	-	1.56

**Black Crappie, Center Hill Reservoir**

	2006*	2007	2008	2009	2010	2011	2012	2013*	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	0.00	-	-	-	-	-	-	-	-	-
<b>Density</b> (electrofishing)										
PSD	-	-	-	-	-	-	-	92	-	-
RSD (preferred)	-	-	-	-	-	-	-	56	-	-
CPUE (total)	2.3	-	-	-	-	0.2	-	7.4	-	-
CPUE ≥ Stock	2.3	-	-	-	-	-	-	7.4	-	-
CPUE ≥ MLL (10-inches)	1.5	-	-	-	-	-	-	3.5	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	109.5	-	-
Quality	-	-	-	-	-	-	-	115.4	-	-
Preferred	-	-	-	-	-	-	-	107.0	-	-
Memorable	-	-	-	-	-	-	-	109.0	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	38,749	40,376	40,187	32,473	28,806	-	21,501	13,060	-	13,324
Angler Hours/Acre	2.13	2.22	2.21	1.78	1.58	-	1.18	0.72	-	0.73
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.38	1.67	0.96	1.50	1.49	-	0.83	0.98	-	0.24
Harvest Rate (any crappie)	0.61	0.59	0.40	0.41	0.63	-	0.29	0.40	-	0.12
% Released (black crappie)	49.7%	40.8%	0.0%	75.2%	38.5%	-	41.2%	60.5%	-	73.9%
Mean Weight (black crappie)	0.99	1.19	1.55	1.27	1.29	-	1.10	0.92	-	1.00
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$146,950	\$200,570	\$172,330	\$123,990	\$97,960	-	\$53,820	\$48,920	-	\$40,120

\*Targeted Sample

**Blacknose Crappie, Center Hill Reservoir**

	2006*	2007	2008	2009	2010	2011	2012	2013*	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	0.00	-	-	-	-	-	-	0.00	-	-
<b>Density</b> (electrofishing)										
PSD	98.0	-	-	-	-	-	-	97.0	-	-
RSD (preferred)	66.0	-	-	-	-	-	-	44.0	-	-
CPUE (total)	12.9	-	-	-	-	3.2	-	26.2	-	-
CPUE $\geq$ Stock	12.9	-	-	-	-	-	-	26.2	-	-
CPUE $\geq$ MLL (10-inches)	8.5	-	-	-	-	-	-	9.7	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	301.0	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	129.1	-	-	-	-	-	-	99.5	-	-
Quality	118.3	-	-	-	-	-	-	116.2	-	-
Preferred	115.7	-	-	-	-	-	-	119.1	-	-
Memorable	107.8	-	-	-	-	-	-	103.6	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	231,402	212,344	81,894	254,538	120,574	174,255	129,010	118,954	114,960	129,984
#/Acre	12.7	11.7	4.5	14.0	6.6	9.6	7.1	6.5	6.3	7.1
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	38,749	40,376	40,187	32,473	28,806	-	21,501	13,060	-	13,324
Angler Hours/Acre	2.13	2.22	2.21	1.78	1.58	-	1.18	0.72	-	0.73
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.38	1.67	0.96	1.50	1.49	-	0.83	0.98	-	0.24
Harvest Rate (any crappie)	0.61	0.59	0.40	0.41	0.63	-	0.29	0.40	-	0.12
% Released (blacknose crappie)	63.6%	68.9%	64.8%	74.9%	57.7%	-	72.4%	58.9%	-	64.9%
Mean Weight (blacknose crappie)	1.22	1.73	1.21	1.26	1.18	-	1.25	1.00	-	1.06
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$146,950	\$200,570	\$172,330	\$123,990	\$97,960	-	\$53,820	\$48,920	-	\$40,120

\*Targeted Sample

**White Crappie, Center Hill Reservoir**

	2006*	2007	2008	2009	2010	2011	2012	2013*	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	-	-	-	-	-	-	-	-	-	-
<b>Density</b> (electrofishing)										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	98.0	-	-	-	-	-	-	-	-	-
CPUE (total)	8.1	-	-	-	-	-	-	1.7	-	-
CPUE ≥ Stock	8.1	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (10-inches)	7.8	-	-	-	-	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	290.0	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	113.7	-	-	-	-	-	-	-	-	-
Preferred	105.5	-	-	-	-	-	-	-	-	-
Memorable	102.4	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	38,749	40,376	40,187	32,473	28,806	-	21,501	13,060	-	13,324
Angler Hours/Acre	2.13	2.22	2.21	1.78	1.58	-	1.18	0.72	-	0.73
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.38	1.67	0.96	1.50	1.49	-	0.83	0.98	-	0.24
Harvest Rate (any crappie)	0.61	0.59	0.40	0.41	0.63	-	0.29	0.40	-	0.12
% Released (w hite crappie)	39.8%	48.3%	38.6%	75.9%	0.0%	-	0.0%	0.0%	-	0.0%
Mean Weight (w hite crappie)	1.05	0.91	0.83	0.99	0.80	-	1.53	1.00	-	0.70
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$146,950	\$200,570	\$172,330	\$123,990	\$97,960	-	\$53,820	\$48,920	-	\$40,120

\*Targeted Sample

**Walleye, Center Hill Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Substock CPUE (gill netting)	0.0	-	-	-	-	0.0	-	-	-	-
CPUE (mid-summer seine)	0.0	0.8	0.1	0.1	0.0	0.0	0.0	0.5	0.0	-
<b>Density</b> (gill netting)										
PSD	-	-	-	-	-	100.0	-	-	-	-
RSD (preferred)	51.0	-	-	-	-	7.0	-	-	-	-
CPUE (total)	1.2	-	-	-	-	1.4	-	-	-	-
CPUE ≥ Stock	1.2	-	-	-	-	1.4	-	-	-	-
CPUE ≥ MLL (15-inches)	1.0	-	-	-	-	1.4	-	-	-	-
<b>Growth</b> (gill netting)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	572.0	-	-	-	-	488.0	-	-	-	-
<b>Condition</b> (gill netting)										
Stock	-	-	-	-	-	106.9	-	-	-	-
Quality	-	-	-	-	-	105.8	-	-	-	-
Preferred	-	-	-	-	-	102.3	-	-	-	-
Memorable	-	-	-	-	-	101.4	-	-	-	-
<b>Mortality</b> (gill netting)										
Total Mortality	65.0%	-	-	-	-	42.0%	-	-	-	-
<b>Stocking</b>										
#	217,449	282,696	243,454	304,967	123,322	224,398	137,459	85,279	242,276	182,666
#/Acre	11.9	15.5	13.4	16.7	6.8	12.3	7.5	4.7	13.3	10.0
<b>Angling Pressure</b> (creel)										
Angler Hours	47,563	47,563	56,375	63,344	56,935	-	53,846	37,116	-	32,212
Angler Hours/Acre	2.61	2.61	3.09	3.48	3.12	-	2.96	2.04	-	1.77
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.23	0.16	0.21	0.30	0.42	-	0.17	0.21	-	0.17
Harvest Rate (intended)	0.12	0.09	0.06	0.12	0.14	-	0.10	0.12	-	0.13
% Released	50.4%	48.1%	67.2%	64.6%	70.5%	-	56.7%	45.9%	-	27.2%
Mean Weight	3.16	2.90	2.94	2.42	2.60	-	2.73	3.10	-	2.44
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Walleye	\$254,360	\$254,360	\$278,020	\$313,330	\$240,640	-	\$178,360	\$115,970	-	\$111,260

**Sunfish, Center Hill Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Bluegill CPUE (mid-summer seine)	1.00	1.10	1.30	3.30	6.90	3.90	1.50	0.90	5.40	3.00
Redear CPUE (mid-summer seine)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	-
<b>Angling Pressure (creel)</b>										
Angler Hours (all sunfish)	17,877	14,652	7,019	14,514	21,622	-	17,499	27,146	-	9,769
Angler Hours/Acre	0.98	0.80	0.39	0.80	1.19	-	0.96	1.49	-	0.54
<b>Fishing Success (creel)</b>										
Catch Rate (any sunfish)	3.63	6.97	1.95	3.75	3.60	-	2.69	1.70	-	4.14
Harvest Rate (any sunfish)	2.18	4.56	1.29	2.05	2.42	-	1.80	1.14	-	2.69
% Released (bluegill)	48.2%	38.7%	40.9%	46.8%	37.4%	-	33.9%	40.5%	-	31.6%
Mean Weight (bluegill)	0.36	0.26	0.30	0.40	0.41	-	0.40	0.43	-	0.37
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Sunfish	\$46,100	\$40,630	\$16,890	\$65,570	\$84,750	-	\$61,190	\$112,420	-	\$50,580

**Catfish, Center Hill Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure (creel)</b>										
Angler Hours (all catfish)	6,305	9,376	6,342	5,550	7,882	-	13,801	13,239	-	8,248
Angler Hours/Acre	0.35	0.51	0.35	0.30	0.43	-	0.76	0.73	-	0.45
<b>Fishing Success (creel)</b>										
Catch Rate (any catfish)	0.42	0.37	0.22	0.21	0.32	-	0.13	0.32	-	0.25
Harvest Rate (any catfish)	0.42	0.37	0.22	0.21	0.32	-	0.13	0.29	-	0.25
% Released (channel)	15.4%	6.7%	24.6%	11.0%	8.1%	-	12.4%	25.5%	-	2.1%
Mean Weight (channel)	3.28	3.14	2.78	3.64	4.12	-	3.62	3.14	-	3.74
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Catfish	\$16,580	\$27,410	\$21,010	\$25,410	\$35,580	-	\$26,950	\$40,700	-	\$22,720

**Shad, Center Hill Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (electrofishing)										
Alewife CPUE	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	128.0	-	-	-	-	-	-	-	-
Threadfin CPUE	-	518.9	-	-	-	-	-	-	-	-

**Habitat Enhancement, Center Hill Reservoir**

Type of Work	Details	Quantity	
		New	Renovated
none	none	none	none

**Water Quality Monitoring, Center Hill Reservoir**

Parameter	Sampling Period	Water Quality
Temperature	none performed	none performed
Dissolved Oxygen		
PH		
Conductivity		



### Chickamauga Reservoir (2015 Annual Report)

#### Description

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**Area (acres):** 35,400

**Mean Depth (feet):**

**Shoreline (miles):** 810

**Counties:** Rhea, Meigs, Bradley, and Polk

**Total Fishing Effort (angler hours):** 584,050

**Total Value by Anglers:** \$3,559,740

#### Summary:

Chickamauga Reservoir was impounded in 1940 by the Tennessee Valley Authority (TVA) which created a 35,400 acre reservoir with 810 miles of shoreline. Chickamauga Reservoir lies within Rhea, Meigs, Bradley, and Polk counties. Major cities adjacent to Chickamauga Reservoir would include Dayton and Chattanooga, TN.

**Largemouth bass (LMB):** Spring electrofishing surveys were conducted for black bass in Chickamauga in 2014. These surveys are typically conducted on alternate years, thus an electrofishing survey was not conducted during the spring of 2015. Annual roving creel surveys were conducted on Chickamauga in 2015.

Fishing for largemouth bass in Chickamauga Reservoir has a very good outlook currently. Positive influences affecting the largemouth bass fishery on Chickamauga Reservoir at the present time are increased aquatic vegetation, Florida Largemouth bass (FLMB) stocking program, ample forage base, and good natural recruitment. A FLMB stocking project was started in the year 2000 and fish have been stocked annually since except for the year 2011 due to the unavailability of FLMB fry. A total of 197,920 FLMB fingerlings were stocked in 2015 into Chickamauga. Genetic analyses continue to be conducted to aid in evaluating the success of this project although original project goals (15% Florida genes present in the LMB genome) were realized and surpassed by the year 2010. Genetic tests have confirmed that F1 hybrids (FLMB x "Native"-pre stocked LMB) exhibit the greatest growth potential. Backcrosses also express greater growth rates than those of the pre-stocked population in Chickamauga Reservoir. Pure FLMB however have been minimally represented in all surveys conducted and thus noncontributory overall to the success of this project on an individual basis.

Electrofishing surveys have shown an increase in abundance of largemouth bass  $\geq 15$  inches, especially over the course of the FLMB stocking project which began in the year 2000. The current LMB regulation at Chickamauga is 5 fish, 15" minimum length limit (MLL). Age and growth studies conducted in 2014 showed that on average a 3 year old LMB from Chickamauga was 334 mm (13.15 inches) in length based on otolith calculations. Condition factors (Wrs) for LMB collected in the 2014 electrofishing survey were satisfactory in all size classes. Creel surveys showed angling pressure to be near the ten year high at 7.41 hours/acre in 2015. Several fish around the ten pound range were reported at various tournament weigh-ins in 2012. Creel surveys have shown that the average size of LMB caught have more than doubled over the course of the FLMB project. The average weight for a harvested lmb according to the 2015 roving creel survey at Chickamauga was 3.36 lbs, the second highest in the past ten years. Hopefully, the benefiting factors (aquatic vegetation, growth rates, forage availability, etc.) that are currently present on Chickamauga Reservoir will remain and continue to be conducive to a providing a premier largemouth bass fishery. The results from summer seining surveys conducted on Chickamauga in 2015 yielded partial confirmation towards a good spawn with a CPUE of 5.80 lmb/seine haul, the

highest in the past ten years from this annual survey. Long term evaluations of this LMB population will be necessary to fully realize and understand the implications of this FLMB stocking program.

On February 13, 2015 the 60 year plus largemouth bass record (14.5 lbs., 1954) in Tennessee was broken by an early morning catch at Chickamauga Reservoir. The new record largemouth bass weighing 15 lbs., 3oz. was caught by angler Gabe Keen. The fish was given extensive review by the Region 3 Reservoir Crew and certified the following day. Genetic tests performed later confirmed that this was a 12 year old fish which was an F1 hybrid (Native LMB X FLMB). There has been much attention and excitement garnished around this fish further promoting the LMB fishery on a national level at Chickamauga.

**Smallmouth bass (SMB):** The population size of smallmouth bass at Chickamauga Reservoir has remained stable and probably could be argued increasing in the last several years. The upper headwaters and lower end provide the best smallmouth bass habitat and therefore host the greatest numbers of SMB in this reservoir. Targeted night time electrofishing samples have been conducted on Chickamauga Reservoir to evaluate this population in the years 2008, 2010 and 2014. CPUE for smallmouth bass for these surveys averaged 20.8 smb/hour which is similar among all 3 years. PSD figures are near the top of the desirable range (70) for all 3 years. More targeted surveys in the future will benefit the management of this population. The current regulation of an 18" MLL and 1 smb/day will ensure that ample opportunity is given to smallmouth bass to excel if the right conditions exist.

**Spotted bass (SPB):** Over the last ten years the average catch rate for SPB in electrofishing surveys on Chickamauga Reservoir have been relatively low. This has also been the case for neighboring reservoirs within the TN River system. One possible explanation for this decline could be from a change in water levels due to TVA's Reservoir Operations Study (ROS) instituted in 2008 which delays the summertime fill to May 15 instead of the traditional April 15. This ROS plan has potentially compromised spawning success for spotted bass by preferred habitat not being available in time for nesting. Another real threat to the native spotted bass populations in Chickamauga Reservoir are the realization of Alabama bass in the upper reaches of the reservoir in the Ocoee River upstream to Parksville Dam. Alabama bass have the potential to out compete native spotted and smallmouth bass as well as hybridize with these species. Alabama bass were first documented in Tennessee at Parksville Reservoir in 2001. The overall CPUE for SPB from Chickamauga via electrofishing in 2010 was 2 spb/hour, 4.4 spb/hour in 2012, and 4.9 spb/hour in 2014. Additionally, CPUE for YOY fish from 2008 – 2014 mid-summer seining samples were below average and have exhibited a downward trend over the past decade. In 2015 however the CPUE for summer seining surveys was 1.90 spb/seine haul, the second highest in the past ten years. There should still be fair opportunity in regards to angling for SPB at Chickamauga Reservoir, especially in the more riverine sections of the river.

The current spotted bass record for the state of TN came from Chickamauga Reservoir on February 22, 2011. This fish weighed 6lbs. 1oz. and the identity was confirmed by genetic tests to rule out any influence of Alabama bass genetics. The spotted bass record was held from another Region 3 reservoir, Center Hill, for many years prior to this catch.

**Crappie:** Angling for crappie on Chickamauga Reservoir has been stable, providing good crappie angling opportunities over the past several years. Currently, catch rates by anglers are above the ten year average. Trapnetting continues to be an excellent predictor of year class strength for mainstem reservoirs along the TN River. Fall trapnetting surveys conducted in 2015 on Chickamauga Reservoir show that black crappie exhibited low catch rates (0.35 BC/net night) when compared to the past 10 years. White

crappie numbers from the same data survey were nonexistent. Crappie fishing on Chickamauga Reservoir continues to be very popular among the fishing public and recently has obtained national recognition for being a priority destination for crappie fishing. Black crappie make up the majority of the total crappie harvest at Chickamauga according to creel surveys. In 2015 creel surveys concluded that an estimated \$146,750 dollars (trip expenditures) was expended in pursuit of crappie at Chickamauga. These same creel surveys recorded a catch rate of 2.38 crappie/hour with an average weight of 0.80 lbs for black crappie and 0.76 lbs for white crappie. Angling pressure recorded for fishermen fishing for crappie at Chickamauga was down slightly (1.83 hrs/acre) in 2015 from the previous year (2.03 hrs/acre).

**Sunfish:** Anglers pursuing “panfish” such as redear sunfish and bluegill will find great opportunities at Chickamauga Reservoir. Redear sunfish regulations currently at Chickamauga are a creel limit of 20 redear/day with no minimum length limit (MLL). Bluegill however have no creel or MLL. Because Chickamauga Reservoir is so conducive to various sunfish species there are good expectations of sustainability and angling success. Catch rates for “panfish” (mainly bluegill and redear) at Chickamauga in 2015 were at 6.64 fish/hour according to the annual roving creel survey, down slightly from the previous year (6.53 sunfish/hour). Bluegill were well represented in the 2015 mid-summer seining surveys with a catch rate of 19.5 bluegill/seine haul. Redear had minimal observations from these same surveys. Bluegill and redear sunfish were both represented and recorded from the fall trapnetting surveys conducted to evaluate that year’s crappie spawning success. Full reservoir levels at Chickamauga Reservoir aren’t realized until May 15 which prior to the implementation of TVA’s ROS plan in 2008 was April 15. This one month delay in achieving summer time pool levels have not allowed redear sunfish to utilize historical, preferred spawning sites. During spring black bass electrofishing surveys, we have observed many historic redear sunfish spawning sites that are not being used because ample water was not available in time for nesting preparations. Redear sunfish and bluegill will continue to be a target for consumptive and sport anglers at Chickamauga Reservoir.

**Sauger:** Sauger populations can vary considerably due to required flow requirements during spawning times and other critical factors affecting spawning success. Sauger, often called TN’s “mystery fish” have been one of the most researched fish species in Tennessee by both TWRA and university studies yet it remains one of the most difficult fish to manage for a variety of reasons, many unknown. The state hatcheries have not had consistent success in propagating this fish and often times realize difficulties in collecting the brood fish. In the past there have been annual stockings of sauger fingerlings to help augment the populations in the TN River impoundments in Region 3 including Chickamauga Reservoir and neighboring reservoirs. These stockings have not always been realized every year however due to various difficulties realized in the hatchery process. According to creel surveys conducted in 2015, catch rates by anglers were 0.58 sauger/hour which was up from 0.02 sauger/hour in 2014. The average weight for a harvested sauger in 2015 was 1.44 lbs which is consistent with averages over the past ten years. Fishing success for sauger can be hard to predict because of all the variables (i.e. weather, water flows, access) affecting this fishery during the winter and pre-spring months when sauger are most vulnerable to angling. In 2014 on Chickamauga Reservoir there was a shift to stocking walleye instead of sauger due to hatchery limitations with sauger and the realized benefits of walleye over sauger from an angling perspective (walleye get bigger, live longer and offer more of a year around fishery). Like sauger, walleye are native to the TN River. Confirmed reports of walleye catches at Chickamauga have been on the increase and is expected to continue with current regular annual stockings of walleye. A walleye stocking program upstream in Watts Bar Reservoir that was initiated in 2011 has no doubt contributed to walleye in the upper reaches of Chickamauga Reservoir as well through dam passage. Sauger densities on the other hand are expected to remain low overall with the sole dependency now being with their natural

spawning success. It is important to note that no complaints have been received by those who identify themselves as sauger fishermen in regards to the change of stocking walleye over sauger. Actually, much praise and excitement has developed around the new walleye stocking project.

**Catfish:** Chickamauga Reservoir continues to be a prime target for those anglers in pursuit of catfish, both sport and commercially. There are three main species for angling; blue, channel, and flathead catfish. Roving creel surveys are the main source of data used to evaluate this fishery. The estimated trip expenditures spent by anglers in pursuit of catfish in 2015 were \$264,820. These same anglers expended the third highest effort in hours over the past ten years in pursuit of catfish at an estimated 3.22 hours/acre. All available information points toward a very productive catfish fishery in the future at Chickamauga Reservoir. Trends observed from harvest data collected by annual roving creel surveys show an overall increase in blue catfish harvest and an overall decrease in channel catfish harvest on Chickamauga. Much effort is invested by commercial fishermen and anglers in pursuit of catfish in Chickamauga. Currently there is a catfish study being conducted by Tennessee Tech University (TTU) that will hopefully answer some questions regarding catfish populations within Chickamauga Reservoir. Several reports of trophy blue catfish continue to be forth coming from catfish anglers who fish Chickamauga in the pursuit thereof.

**Striped bass:** Anglers spent an estimated \$186,610 in 2014 in pursuit of striped bass in Chickamauga Reservoir. In 2015 there were 51,265 striped bass fingerlings stocked into Chickamauga Reservoir. Stockings of striped bass into Chickamauga have not occurred often due to fear of interactions with commercial entanglement gear and also the availability of these fingerlings. Striped bass stocked in neighboring Watts Bar Reservoir annually do find their way to Chickamauga through dam passage. Striped bass congregate in the Watts Bar tailwaters (Chickamauga headwaters) during various times of the year especially in spring and fall. An abundant amount gizzard and threadfin shad are some of the biggest reasons for this assemblage. Skipjack herring also represent a preferred forage base at Watts Bar for striped bass although populations are cyclic. Mean weight of harvested striped bass in 2015 was 14.79 lbs. which is low as compared to the past ten years. The average catch rate was 0.42 striped bass/hour which was the lowest for the past ten years. Good fishing for striped bass is expected to remain consistent in Chickamauga Reservoir, mainly in the headwaters and upper navigable reaches of the Hiwassee River where striped bass seek out thermal refuges and abundant forage in hot summer months.

### Angler Attitude Surveys

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. In an effort to accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions (see questionnaire in Appendix) in addition to routine,

state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, avg size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often times, minority user groups succeed in representing the sentiment of the angling public when actually it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

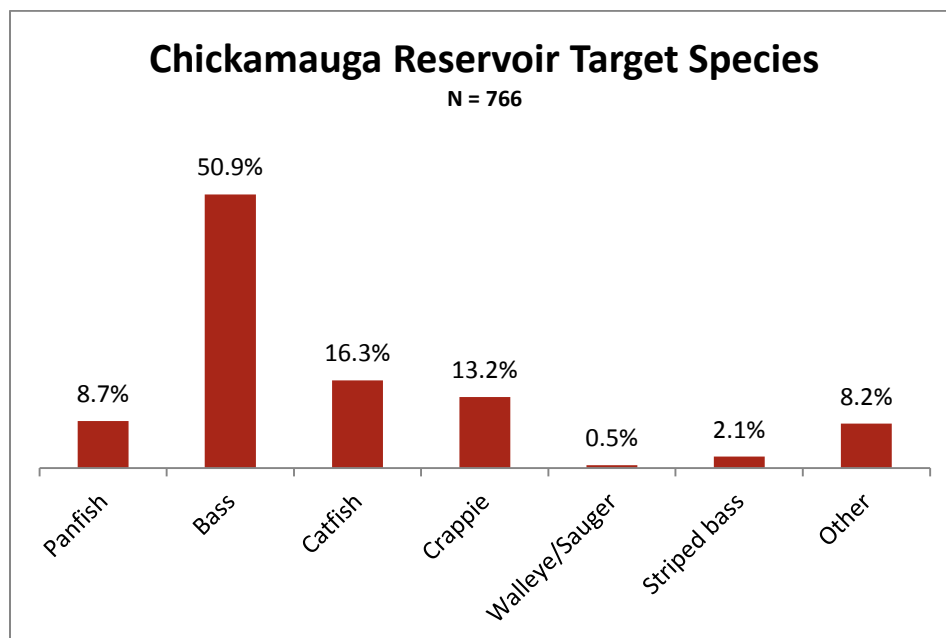
We sampled our angling public with attitude surveys again in 2015 on the four reservoirs in Region 3 that creel surveys were conducted (Center Hill, Chickamauga, Dale Hollow, and Watts Bar Reservoirs). Overall “approval” of Region 3 reservoirs in this 2015 survey is very favorable at the current time according to these 2015 surveys. We feel confident that this summary of our “angler attitudes” will once again provide insight to how these particular reservoirs are evaluated by our angling public. This type information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of our creel clerks (Danny Stone, Tim Poole) and the Region 3 reservoir fisheries crew.

Results from the Angler Attitude Survey conducted at Chickamauga Reservoir are as follows:

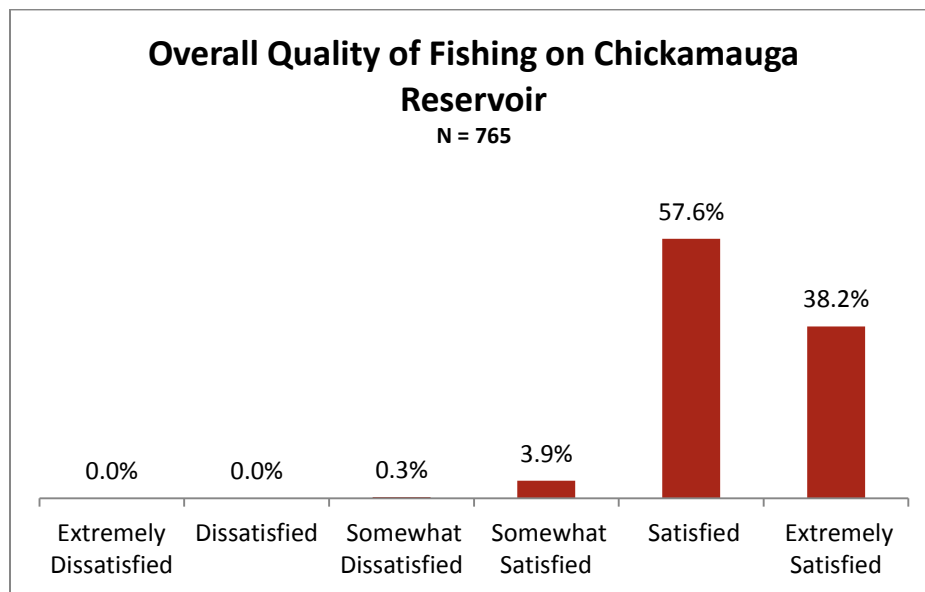
There were a total of 766 anglers who were fishing at Chickamauga Reservoir interviewed by a creel clerk for the angler attitude survey in 2015. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

The most targeted species of fish by anglers on Chickamauga was bass (50.9%) with catfish being a distant second (16.3%), see graph below.

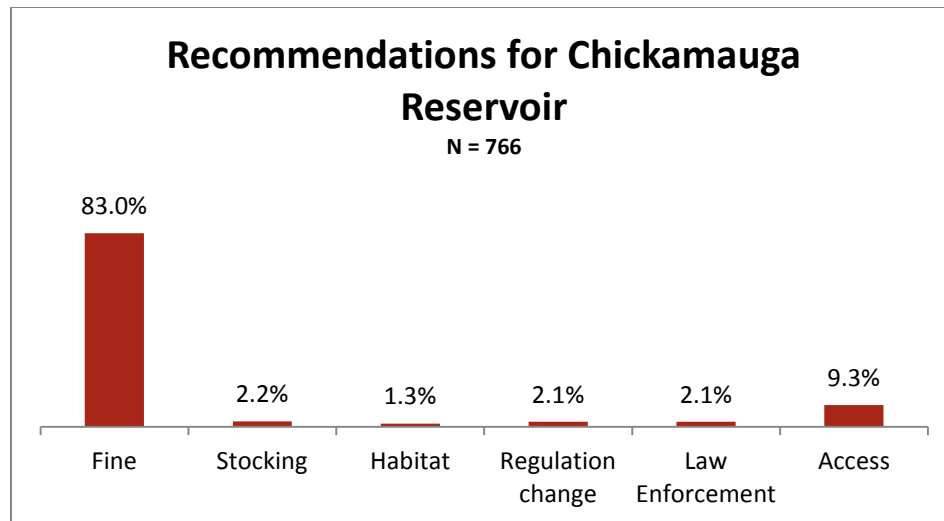


These surveys also revealed that fishermen who identified “Bass” (n=390) as their primary target species, 90% of those (351) also fished bass tournaments. On average, these bass tournament fishermen at Chickamauga Reservoir fished an average of 9.2 bass tournaments/year at Chickamauga Reservoir.

As the graph below depicts anglers expressed a high satisfaction rating (99.7%) in 2015 overall when asked about the “overall quality of fishing on Chickamauga Reservoir”.



According to the graph below, when anglers who fish Chickamauga reservoir were asked if they had any recommendations the large majority (83.0%) had none indicating that everything was “fine”. Boating access was the category with the most recommendations or areas of concern. This is due in large part to the fishing pressure being realized at Chickamauga Reservoir currently from national exposure to the large stringers and large individual largemouth bass being caught. A high volume of bass tournaments are present on Chickamauga throughout the year which has overwhelmed the few existing boat ramps at Chickamauga. This situation is further complicated in the winter months when fewer ramps are available due to winter drawdowns leaving some ramps unusable. A Florida bass stocking program initiated in the year 2000 was the catalyst for the favorable LMB fishing currently experienced at Chickamauga. Crappie fishing here has also been ranked high nationally recently further driving the influence of anglers. Local anglers especially have voiced concerns of not having sufficient boat launching sites to facilitate the demand by the angling public.



Overall, the angler attitudes obtained in 2015 from those fishing at Chickamauga reservoir are ones that exhibit a high approval for the current fish management of this reservoir by TWRA.

#### Black Bass

Angling Pressure	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
All Black Bass (hrs)	187,856	231,148	200,330	190,311	274,393	273,526	255,190	-	258,519	262,403
(hrs/acre)	5.31	6.53	5.66	5.38	7.75	7.73	7.21	-	7.30	7.41
Any Black Bass (hrs)	187,626	231,023	200,330	190,073	273,195	272,540	255,190	-	258,519	262,403
(hrs/acre)	5.30	6.53	5.66	5.37	7.72	7.70	7.21	-	7.30	7.41
Largemouth Bass (hrs)	230	-	-	238	1,198	986	-	-	2,503	11,985
(hrs/acre)	0.01	-	-	0.01	0.03	0.03	-	-	0.07	0.34
Smallmouth Bass (hrs)	-	125	-	-	-	-	-	-	-	-
(hrs/acre)	-	0.00	-	-	-	-	-	-	-	-
Spotted Bass (hrs)	-	-	-	-	-	-	-	-	-	-
(hrs/acre)	-	-	-	-	-	-	-	-	-	-
<b>Tournaments (all black bass)</b>										
# Tournaments (BITE)		7							-	
Pounds/Angler Day (BITE)		3.4							-	
Bass/Angler Day (BITE)		1.6							-	
Tournament Angler Hrs/Acre (creel)									-	
Tournament Catch Rate (creel)	1.30	1.28	1.34	1.73	1.83	1.10	1.14	-	1.01	0.72
Non-Tournament Catch Rate (creel)	1.05	1.05	1.22	1.08	0.92	0.72	0.83	-	0.60	0.83
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	\$563,550	\$900,470	\$1,673,470	\$1,562,860	\$1,837,830	\$2,202,360	\$910,800	-	\$1,445,980	\$959,340
Any Black Bass	\$563,550	\$900,160	\$1,673,470	\$1,562,860	\$1,825,150	\$2,188,450	\$910,800	-	\$1,445,980	\$959,340
Largemouth Bass	-	-	-	-	\$12,680	\$13,910	-	-	\$14,770	\$43,890
Smallmouth Bass	-	\$310	-	-	-	-	-	-	-	-
Spotted Bass	-	-	-	-	-	-	-	-	-	-

**Largemouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	5.50	-	17.20	-	3.63	-	4.50	-	2.99	-
CPUE (mid-summer seine)	1.80	1.60	0.50	4.60	5.30	1.80	2.00	3.00	3.50	5.80
<b>Density</b> (spring electrofishing)										
PSD (quality)	61.0	-	65.0	-	79.0	-	88.0	-	78.6	-
RSD (preferred)	18.0	-	29.0	-	25.0	-	61.0	-	54.8	-
CPUE (total)	43.2	-	89.6	-	38.2	-	40.0	-	45.2	-
CPUE ≥ Stock	37.7	-	72.3	-	34.5	-	36.4	-	40.4	-
CPUE ≥ MLL (15-inches)	6.8	-	48.5	-	8.5	-	32.6	-	18.1	-
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	334.0	-
<b>Condition</b> (spring electrofishing)										
Stock	94.1	-	96.9	-	96.5	-	101.7	-	91.7	-
Quality	89.2	-	101.6	-	87.1	-	103.1	-	92.1	-
Preferred	91.4	-	98.1	-	87.2	-	102.2	-	100.6	-
Memorable	82.6	-	97.1	-	96.5	-	101.3	-	97.3	-
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	31.5%	-
<b>Stocking</b> (Florida LMB)										
#	195,082	102,034	96,715	199,981	179,767	0	133,966	236,663	76,334	197,920
#/Acre	5.51	2.88	2.73	5.65	5.08	0.00	3.78	6.69	2.16	5.59
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	1.36	N/A	N/A	0.00	0.48	2.63	N/A	-	0.65	0.64
Catch Rate, num./hr (any black bass)	1.09	1.12	1.18	1.13	1.02	0.89	0.86	-	0.62	0.74
Harvest Rate, num./hr (any black bass)	0.08	0.12	0.06	0.08	0.06	0.08	0.02	-	0.00	0.05
% Released	92.3%	88.3%	94.5%	93.3%	93.2%	91.5%	97.9%	-	89.4%	92.4%
Mean Weight	2.58	2.34	3.03	2.92	2.90	2.93	3.63	-	3.42	3.36



**Smallmouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	0.50	0.00	0.00	0.00	0.00	0.00	0.30	0.30	2.10	0.30
<b>Density</b> (spring electrofishing)										
PSD	33	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	1.1	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Preferred	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (18-inches)	-	-	-	-	-	-	-	-	-	-
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	92.1	-	-	-	-	-	-	-	-	-
Quality	67.6	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	N/A	0.00	N/A	N/A	N/A	N/A	N/A	-	N/A	-
Catch Rate, num./hr (any black bass)	1.09	1.12	1.18	1.13	1.02	0.89	0.86	-	0.62	0.74
Harvest Rate, num./hr (any black bass)	0.08	0.12	0.06	0.08	0.06	0.08	0.02	-	0.06	0.05
% Released	92.3%	88.3%	94.5%	97.5%	100.0%	97.8%	95.6%	-	100.0%	-
Mean Weight	2.58	2.34	3.03	3.75	N/A	3.63	4.09	-	N/A	-

**Smallmouth Bass (Target Sample)**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE			0.70		0.40				N/A	-
<b>Density</b> (electrofishing)										
PSD (quality)			75		70				76	-
RSD (preferred)			38.0		43.0				61	-
CPUE (preferred)			-		6.9				16.3	-
CPUE (total)			18.5		22.3				21.5	-
CPUE $\geq$ Stock			17.8		21.9				21.5	-
CPUE $\geq$ Preferred			6.3		9.3				7.5	-
CPUE $\geq$ MLL (18-inches)			0.7						0.4	-
<b>Growth</b> (electrofishing)										
Length Age-1									-	-
Length Age-3									-	-
<b>Condition</b> (spring electrofishing)										
Stock			82.9		93.6				95.1	-
Quality			92.7		85.0				84.4	-
Preferred			87.6		81.0				85.6	-
Memorable			87.1		80.2				93.4	-
<b>Mortality</b> (electrofishing)										
Total Mortality									-	-

Targeted Samples for SMB are at night unless otherwise noted.

**Spotted Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	0.90	-	1.10	-		-	0.00	-	0.57	
CPUE (mid-summer seine)	3.00	3.10	1.90	1.10	1.30	1.00	1.10	-	1.10	1.90
<b>Density</b> (spring electrofishing)										
PSD (quality)	27.0	-	71.0	-		-	63.0	-	62.3	-
RSD (preferred)	5.0	-	6.0	-		-	21.0	-	18.8	-
CPUE (total)	7.3	-	10.0	-		-	4.4	-	4.9	-
CPUE $\geq$ Stock	6.4	-	8.9	-		-	4.4	-	2.7	-
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-		-		-	-	-
Length Age-3	-	-	-	-		-		-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	96.2	-	116.0	-		-	106.3	-	101.4	-
Quality	91.2	-	96.0	-		-	94.9	-	94.4	-
Preferred	90.7	-	99.0	-		-	95.7	-	94.7	-
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-
Catch Rate, num./hr (any black bass)	1.09	1.12	1.18	1.13	1.02	0.89	0.86	0.86	0.62	0.74
Harvest Rate, num./hr (any black bass)	0.08	0.12	0.06	0.08	0.06	0.08	0.02	0.02	0.06	0.05
% Released	92.3%	88.3%	94.5%	99.2%	99.6%	99.7%	96.8%	96.8%	97.7%	-
Mean Weight	2.58	2.34	3.03	1.52	1.30	2.30	1.90	1.90	1.08	-

**Black Crappie**

	2006	2007	2008	2009	2010*	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.30	1.20	-	2.80	0.85	0.13	0.00	1.55	2.52	0.35
CPUE (mid-summer seine)									0.5	0.3
<b>Density</b> (electrofishing)										
									**	
PSD (quality)	75.0	-	96.0	-	92.0	-	100.0	-	100.0	-
RSD (preferred)	19.0	-	69.0	-	71.0	-	87.0	-	62.0	-
CPUE (total)	9.3	-	13.6	-	161.3	-	4.2	-	3.0	-
CPUE > Stock	9.3	-	13.6	-	148.2	-	4.2	-	-	-
CPUE > MLL (10-inches)	1.9	-	10.2	-	116.0	-	3.6	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	285.0	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	96.4	-	109.4	-	86.1	-	-	-
Quality	-	-	100.4	-	102.0	-	97.1	-	-	-
Preferred	-	-	99.3	-	94.8	-	87.1	-	-	-
Memorable	-	-	96.5	-	91.9	-	84.3	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	65,524	70,513	40,793	44,290	77,955	73,257	85,180	-	71,938	64,681
Angler Hours/Acre	1.85	1.99	1.15	1.25	2.20	2.07	2.41	-	2.03	1.83
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	2.14	2.70	2.09	2.39	2.41	2.29	2.51	-	2.17	2.38
Harvest Rate (any crappie)	0.91	1.02	0.84	1.07	1.07	0.88	1.00	-	0.93	1.33
% Released (black crappie)	61.6%	64.1%	63.1%	56.8%	57.0%	65.1%	60.2%	-	54.7%	44.3%
Mean Weight (black crappie)	0.79	0.80	0.84	0.81	0.85	0.88	0.81	-	0.76	0.80
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$309,050	\$388,630	\$289,610	\$293,460	\$430,240	\$471,190	\$226,610	-	\$157,090	\$146,750

Non-target sample unless otherwise noted.

\* Target Sample

\*\* Data collected from trap netting

**White Crappie**

	2006	2007	2008	2009	2010*	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.25	0.60	-	3.75	0.75	-	-	0.50	-	-
CPUE (mid-summer seine)									0.5	0.3
<b>Density</b> (electrofishing)										
PSD	-	-	-	-	-	-	91.0	-	-	-
RSD (preferred)	-	-	-	-	-	-	45.0	-	-	-
CPUE (total)	-	-	-	-	6.3	-	2.0	-	-	-
CPUE $\geq$ Stock	-	-	-	-	-	-	-	-	-	-
CPUE $\geq$ MLL (10-inches)	-	-	-	-	-	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	65,524	70,513	40,793	44,290	77,955	73,257	85,180	-	71,938	64,681
Angler Hours/Acre	1.85	1.99	1.15	1.25	2.20	2.07	2.41	-	2.03	1.83
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	2.14	2.70	2.09	2.39	2.41	2.29	2.51	-	2.17	2.38
Harvest Rate (any crappie)	0.91	1.02	0.84	1.07	1.07	0.88	1.00	-	0.93	1.33
% Released (w hite crappie)	58.5%	68.6%	69.5%	61.2%	58.2%	60.7%	64.5%	-	54.4%	48.0%
Mean Weight (w hite crappie)	0.72	0.75	0.87	0.77	0.84	0.83	0.79	-	0.76	0.77
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$309,050	\$388,630	\$289,610	\$293,460	\$430,240	\$471,190	\$226,610	-	\$157,090	\$146,750

Non-target sample unless otherwise noted.

\* Target Sample

**Blacknose Crappie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	65,524	70,513	40,793	44,290	77,955	73,257	85,180	-	71,938	64,681
Angler Hours/Acre	1.85	1.99	1.15	1.25	2.20	2.07	2.41	-	2.03	1.83
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	2.14	2.70	2.09	2.39	2.41	2.29	2.51	-	2.17	2.38
Harvest Rate (any crappie)	0.91	1.02	0.84	1.07	1.07	0.88	1.00	-	0.93	1.33
% Released (blacknose crappie)	37.7%	21.3%	100.0%	90.7%	80.7%	45.2%	0.0%	-	N/A	0.0%
Mean Weight (blacknose crappie)	0.75	0.86	-	1.08	1.00	0.65	0.65	-	N/A	0.80
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$309,050	\$388,630	\$289,610	\$293,460	\$430,240	\$471,190	\$226,610	-	\$157,090	\$146,750

**Sauger**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Substock CPUE	-	-	-	-	-	-	-	-	-	-
<b>Density</b> (gill netting)										
PSD	-	-	-	-	99.0	-	-	-	-	-
RSD (preferred)	-	-	-	-	71.0	-	-	-	-	-
CPUE (total)	-	-	-	-	9.6	-	-	-	-	-
CPUE $\geq$ Stock	-	-	-	-	9.6	-	-	-	-	-
CPUE $\geq$ MLL (15-inches)	-	-	-	-	6.8	-	-	-	-	-
<b>Growth</b> (gill netting)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (gill netting)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	91.8	-	-	-	-	-
Preferred	-	-	-	-	102.9	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (gill netting)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	219,619	111,757	166,853	69,699	80,348	70,311	-	0	0	0
#/Acre	6.2	3.2	4.7	2.0	2.3	2.0	-	0.0	0.0	0.0
<b>Angling Pressure</b> (creel)										
Angler Hours	4,389	491	8,829	10,277	3,655	4,012	5,879	-	2,181	2,943
Angler Hours/Acre	0.12	0.01	0.25	0.29	0.10	0.11	0.17	-	0.06	0.08
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.53	1.23	2.73	1.23	1.59	1.11	1.14	-	0.02	0.58
Harvest Rate (intended)	0.16	0.19	0.22	0.34	0.56	0.44	0.34	-	0.00	0.32
% Released	69.8%	85.2%	92.9%	72.5%	71.8%	58.2%	69.0%	-	100.0%	41.9%
Mean Weight	1.45	1.50	1.52	1.66	1.67	1.53	1.47	-	N/A	1.44
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Sauger	\$23,120	\$3,330	\$43,850	\$83,240	\$17,250	\$22,550	\$16,900	-	\$14,390	\$4,730

**Walleye**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Substock CPUE	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	0.3	0
<b>Density</b> (gill netting)										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-
CPUE $\geq$ Stock	-	-	-	-	-	-	-	-	-	-
CPUE $\geq$ MLL (16-inches)	-	-	-	-	-	-	-	-	-	-
<b>Growth</b> (gill netting)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (gill netting)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (gill netting)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	-	-	-	-	-	267,247	192,422
#/Acre	-	-	-	-	-	-	-	-	7.55	5.4
<b>Angling Pressure</b> (creel)										
Angler Hours	-	-	-	-	-	-	-	-	604	4,679
Angler Hours/Acre	-	-	-	-	-	-	-	-	0.02	0.13
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	-	-	-	-	-	0.28	1.11
Harvest Rate (intended)	-	-	-	-	-	-	-	-	0.00	0.60
% Released	-	-	-	-	-	-	-	-	100.0%	79.7%
Mean Weight	-	-	-	-	-	-	-	-	N/A	2.09
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Walleye	-	-	-	-	-	-	-	-	\$1,060	\$8,340



**Striped Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Substock CPUE										
<b>Density</b> (gill netting)										
PSD										
RSD (preferred)										
CPUE (total)										
CPUE $\geq$ Stock										
CPUE $\geq$ 15-inches										
<b>Growth</b> (gill netting)										
Length Age-2										
Length Age-3										
<b>Condition</b> (gill netting)										
Stock										
Quality										
Preferred										
Memorable										
<b>Mortality</b> (gill netting)										
Total Mortality									-	
<b>Stocking</b>										
#						50,623			-	51,265
#/Acre						1.4			-	1.5
<b>Angling Pressure</b> (creel)										
Angler Hours	17,318	8,908	19,563	10,582	16,386	14,870	17,221	-	12,156	14,089
Angler Hours/Acre	0.49	0.25	0.55	0.30	0.46	0.42	0.49	-	0.34	0.40
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.77	0.44	0.58	0.43	0.84	0.43	0.73	-	0.87	0.42
Harvest Rate (intended)	0.24	0.17	0.21	0.10	0.11	0.02	0.00	-	0.01	0.05
% Released	72.6%	63.3%	66.0%	78.9%	88.4%	94.7%	93.9%	-	96.6%	88.9%
Mean Weight	15.76	19.71	15.38	16.09	17.86	15.96	13.84	-	23.38	14.79
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Striped Bass	\$118,900	\$86,030	\$214,510	\$91,570	\$295,510	\$295,420	\$282,470	-	\$186,610	

**Bluegill**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	0.00								-	
CPUE (mid-summer seine)					17.6	6.10	13.6	10.9	8.00	19.5
Substock CPUE (trap netting)									15.05	5.98
<b>Density</b> (electrofishing)										
PSD	34.0								-	-
RSD (preferred)	4.0								-	-
CPUE (total)	35.3								-	-
CPUE $\geq$ Stock	35.3								-	-
<b>Growth</b> (electrofishing)										
Length Age-1									-	-
Length Age-3									-	-
<b>Condition</b> (electrofishing)										
Stock	95.2								-	-
Quality	96.4								-	-
Preferred	94.9								-	-
Memorable	-								-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (anysunfish)	8,193	3,889	963	2,589	2,237	2,157	1,460	-	16,177	6,896
Angler Hours/Acre	0.23	0.11	0.03	0.07	0.06	0.06	0.04	-	0.46	0.19
<b>Fishing Success</b> (creel)										
Catch Rate (any sunfish)	6.77	11.30	12.01	6.60	9.29	8.23	12.98	-	6.53	6.64
Harvest Rate (any sunfish)	4.04	6.45	5.21	2.32	2.61	5.43	6.98	-	3.19	3.30
% Released (bluegill)	64.3%	68.8%	71.6%	73.6%	81.2%	76.7%	74.3%	-	61.0%	62.9%
Mean Weight (bluegill)	0.26	0.27	0.26	0.25	0.27	0.25	0.25	-	0.23	0.23
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Sunfish	\$32,300	\$17,610	\$1,920	\$20,920	\$21,480	\$20,530	\$4,140	-	\$32,870	\$14,340

Non-target sample unless otherwise noted.

**Redear**

	2006	2007	2008	2009	2010	2011	2012*	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	0.60		0.40				0.00		-	-
CPUE (mid-summer seine)					0.6	0.80	0.40	1.80	0.40	0.40
Substock CPUE (trap netting)									9.65	2.65
<b>Density</b> (electrofishing)										
PSD	55.0		48.0		37.0		59.0		-	-
RSD (preferred)	12.0		11.0		0.0		1.0		-	-
CPUE (total)	28.6		39.5		17.6		65.2		-	-
CPUE $\geq$ Stock	28.0		39.1		17.6		65.2		-	-
<b>Growth</b> (electrofishing)										
Length Age-1									-	-
Length Age-3									-	-
<b>Condition</b> (electrofishing)										
Stock	95.7		86.2						-	-
Quality	90.3		87.5						-	-
Preferred	89.6		85.5						-	-
Memorable	-								-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (anysunfish)	8,193	3,889	963	2,589	2,237	2,157	1,460	-	16,177	6,896
Angler Hours/Acre	0.23	0.11	0.03	0.07	0.06	0.06	0.04	-	0.46	0.19
<b>Fishing Success</b> (creel)										
Catch Rate (any sunfish)	6.77	11.30	12.01	6.60	9.29	8.23	12.98	-	6.53	6.64
Harvest Rate (any sunfish)	4.04	6.45	5.21	2.32	2.61	5.43	6.98	-	3.19	3.30
% Released (redeer)	39.9%	35.0%	34.7%	52.4%	35.1%	56.2%	40.8%	-	46.2%	41.9%
Mean Weight (redeer)	0.55	0.38	0.48	0.43	0.36	0.39	0.37	-	0.33	0.34
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Sunfish	\$32,300	\$17,610	\$1,920	\$20,920	\$21,480	\$20,530	\$4,140	-	\$32,870	\$14,340

Non-target sample unless otherwise noted.

\* Broodfish collection. No weights were taken.

**Catfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all catfish)	76,182	101,168	100,324	99,968	148,757	153,140	108,984	-	90,299	114,126
Angler Hours/Acre	2.15	2.86	2.83	2.82	4.20	4.33	3.08	-	2.55	3.22
<b>Fishing Success</b> (creel)										
Catch Rate (any catfish)	2.16	1.85	1.48	1.42	1.23	1.04	1.30	-	1.35	1.62
Harvest Rate (any catfish)	1.45	1.12	0.63	0.70	0.54	0.34	0.49	-	0.33	0.67
% Released (channel)	40.9%	45.0%	56.2%	50.5%	51.2%	77.6%	47.8%	-	70.8%	56.7%
Mean Weight (channel)	2.96	3.16	3.29	3.34	3.37	3.20	3.26	-	3.15	2.87
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Catfish	\$340,270	\$660,490	\$730,840	\$717,470	\$811,940	\$819,040	\$260,000	-	\$233,300	\$264,820

**Shad**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (electrofishing)										
Alewife CPUE									-	-
Gizzard CPUE			17.1				15.3		-	-
Gizzard CPUE (mid-summer seine)									1.1	-
Threadfin CPUE			26.7				6.7		-	-
Threadfin CPUE (mid-summer seine)									1.5	0.0

**Habitat Enhancement - 2015**

Type of Work	Details	Quantity	
		New	Renovated
Rebrushed Frazier Fishing Pier near Dayton			

**Water Quality Monitoring - 2015**

Parameter	Sampling Period	Water Quality
Temperature		
Dissolved Oxygen		
PH		
Conductivity		

### Cordell Hull Reservoir (2015 Annual Report)

#### Description

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**Area (acres):** 13,920      **Mean Depth (feet):**      **Shoreline (miles):** 381

**Counties:** Smith, Jackson, Clay

**Full Pool Elevation (feet-msl):** 504      **Winter Pool Elevation (feet-msl):** 499

**Dam Completion:** 1973

#### Summary:

Spring electrofishing surveys were conducted for black bass on Center Hill in 2014. These surveys are typically conducted there on alternate years, thus the next electrofishing survey is planned for the spring of 2016 at Cordell Hull Reservoir. Additionally no creel surveys have been conducted on Cordell Hull since 2012.

**Largemouth bass (LMB):** Excellent opportunities exist currently for catching largemouth bass in Cordell Hull Reservoir. A trophy slot limit of 17-23" for LMB was done away with in 2015 and replaced with regulation of 5 lmb/day, 15" minimum length limit (MLL). A good forage base of gizzard and threadfin shad have helped sustain this fishery through the years. However, beneficial density levels of aquatic vegetation have not been consistent at Cordell Hull in the past several years. This is due in part to heavy flow regimes during high rainfall events and also the prolonged effects of the Wolf Creek dam repair project upstream in Kentucky. Future spring electrofishing surveys will continue to evaluate the LMB fishery at Cordell Hull. The mid-summer seining surveys were off the charts in 2010 with a CPUE of 22.1 lmb/seine haul and the second highest recorded within the last ten years in the recent 2015 survey at 13.5 lmb/seine haul. Overall CPUE for lmb collected during the spring electrofishing surveys for the past five years are consistent and at a favorable rate. If the LMB population densities and environmental parameters stay in place, a quality LMB fishery should be sustained in Cordell Hull Reservoir. According to a roving creel survey conducted in 2012, fishermen expended an estimated \$246,000 in pursuit of "bass" in Cordell Hull and experienced a catch rate for LMB on the average of 2.08 lmb/hour. Future creel surveys to evaluate the black bass fishery at Cordell Hull will be recommended.

**Smallmouth bass (SMB):** Smallmouth bass in Cordell Hull are not as prevalent as largemouth bass but their occurrence has remained persistent over the past several years. They continue to show up in spring electrofishing surveys, typically on sloping rocky banks, at an average CPUE over the last ten years of 4.8 smb/hour. Although Cordell Hull is probably not a destination for smallmouth bass anglers, it is anticipated that anglers will have real possibilities of catching SMB while angling there. Several rocky banks along Cordell Hull's shoreline are available offering preferred SMB habitat.

**Spotted bass (SPB):** Spotted bass are not observed in our various data collection surveys. However pre-impoundment studies showed a population of spotted bass in rivers that would later incorporate into Cordell Hull Reservoir. Possible depletion of preferred spawning areas and habitat due to establishing the reservoir are to blame for the apparent absence of spotted bass in Cordell Hull Reservoir.

**Crappie (white, black & blacknose):** Crappie fishing in Cordell Hull Reservoir remains average to good overall. According to the last roving creel survey conducted in 2012, the average catch rate was 1.65 crappie/hour. Anglers spent an estimated \$63,000 in pursuit of crappie in 2012 at Cordell Hull. Cordell

Hull is characterized as being a predominantly white crappie reservoir. However, some “black nose” black crappie and black crappie also appear in anglers’ catches. Blacknose crappie were stocked into Cordell Hull Reservoir several years ago by TWRA with fish raised at a fish pond located at McClure’s Bend (part of Cordell Hull WMA) and a small pond above Celina, both ponds were adjacent to Cordell Hull Reservoir which allowed direct stocking of these crappie without any transportation.

Both fall trapnetting and electrofishing were utilized in 2015 as part of a data collection endeavor to look at the crappie fishery at Cordell Hull Reservoir. White crappie had a minimal representation (0.03 white crappie/net night) during the trapnetting surveys and black crappie were non-existent. Good numbers of crappie were realized during the targeted electrofishing surveys for crappie. The CPUE for white crappie (124.6 WC/hr) were much higher than the black crappie (42.3 BC/hr).

**Sunfish:** Good bluegill fishing opportunities exist for anglers fishing Cordell Hull. According to the creel surveys in 2012, the catch rates were low compared to other reservoirs with like characteristics. Mid-summer seining surveys conducted in 2014 yielded a CPUE of 56.9 bluegill/seine haul, and 87.4 bluegill/seine haul in 2015. Bluegill and longear sunfish continue to exhibit good population densities at Cordell Hull.

**Sauger:** Cordell Hull offers some excellent opportunities for anglers in the pursuit of sauger. Currently sauger populations are self-sustaining in Cordell Hull with no enhancement from stocking. Possibly sauger do migrate upstream from Old Hickory Reservoir which does have an annual sauger stocking program. This is one of the few reservoirs in the state that can boast of such stability when referencing sauger populations. An estimated \$69,000 was spent with on trip expenditures in 2012 in pursuit of this fish.

**Walleye:** A limited amount of walleye are caught in Cordell Hull Reservoir each year. The closely related sauger is more abundant at Cordell Hull and thus provides a greater opportunity for anglers. The state and world record walleye came from neighboring Old Hickory Reservoir (below Cordell Hull) back in 1960 which weighed 25 lbs. Walleye fingerlings have been stocked into Cordell Hull for the past two years with 113,835 walleye stocked in 2014 and 29,223 walleye stocked in 2015. Future creel surveys should offer a good avenue for evaluating these stockings.

**Catfish:** Catfishing on Cordell Hull is not as popular as in other reservoirs across the state and also in comparison to other game species of fish within this reservoir. Creel surveys in 2012 indicated low catch rates of 0.16 catfish/hour with an average weight of 1.89 lbs. Anglers should expect fair success while pursuing catfish in this reservoir.

**Striped bass:** TWRA continues to stock striped bass annually in Cordell Hull Reservoir. Great numbers of gizzard and threadfin shad continue to provide a forage base very conducive to a trophy striped bass fishery. Skipjack herring are also a preferred food for striped bass in Cordell Hull Reservoir as well as the preferred bait for striped bass anglers. The state record striped bass weighing 65 lb. 6 oz. was caught in Cordell Hull Reservoir in the year 2000 by Mr. Ralph H. Dallas. Past and current work on the Wolf Creek Dam in Kentucky on the upper end of Cordell Hull Reservoir has changed flow regimes within the reservoir. It is thought that this also has had influence on striped bass behaviors possibly making attempted spawning runs or seeking thermal refuges upstream in Kentucky waters. This Wolf Creek Dam repair project is now complete and normal reservoir operations will hopefully resume. Attempts to gillnet for striped bass have been challenging over past years therefore it is important to gather creel info when possible to help evaluate the striped bass population, pressure on this resource, and estimated harvest. Because of TWRA’s annual stocking program of striped bass at Cordell Hull, excellent opportunities for

angling should persist. A roving creel survey conducted in 2012 showed very low pressure in pursuit of striped bass on this reservoir and only an estimated \$14,000 expended in pursuit of this fish.

### **Lakewide Angling Summary**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	-	-	-	-	-	178,710	192,583	-	-	-
Angler Hours Per Acre	-	-	-	-	-	14.9	16.1	-	-	-
Angler Trips	-	-	-	-	-	34,967	36,435	-	-	-
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	-	-	-	-	-	575,830	610,090	-	-	-

**Black Bass, Cordell Hull Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	-	-	-	-	-	78,904	62,137	-	-	-
(hrs/acre)	-	-	-	-	-	7	4	-	-	-
Any Black Bass (hrs)	-	-	-	-	-	75,685	60,386	-	-	-
(hrs/acre)	-	-	-	-	-	6	4	-	-	-
Largemouth Bass (hrs)	-	-	-	-	-	3,219	459	-	-	-
(hrs/acre)	-	-	-	-	-	0	0	-	-	-
Smallmouth Bass (hrs)	-	-	-	-	-	-	1,292	-	-	-
(hrs/acre)	-	-	-	-	-	-	0	-	-	-
Spotted Bass (hrs)	-	-	-	-	-	-	-	-	-	-
(hrs/acre)	-	-	-	-	-	-	-	-	-	-
<b>Tournaments (all black bass)</b>										
# Tournaments (BITE)	-	-	-	-	-	-	-	-	-	-
Pounds/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-
Bass/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-
Tournament Angler Hrs/Acre (creel)	-	-	-	-	-	-	-	-	-	-
Tournament Catch Rate (creel)	-	-	-	-	-	1.2	0.7	-	-	-
Non-Tournament Catch Rate (creel)	-	-	-	-	-	0.6	0.6	-	-	-
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	-	-	-	-	-	\$556,380	\$248,750	-	-	-
Any Black Bass	-	-	-	-	-	\$535,420	\$245,860	-	-	-
Largemouth Bass	-	-	-	-	-	\$20,960	\$2,330	-	-	-
Smallmouth Bass	-	-	-	-	-	-	\$560	-	-	-
Spotted Bass	-	-	-	-	-	-	-	-	-	-



**Largemouth Bass, Cordell Hull Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	46.80	-	16.40	-	2.00	-	7.00	-	0.67	-
CPUE (Mid-summer seine)	3.10	7.10	7.90	1.10	22.10	1.30	3.80	3.50	3.90	13.50
<b>Density</b> (spring electrofishing)										
PSD	-	-	48.0	-	40.0	-	50.0	-	64.4	-
RSD (preferred)	23.0	-	12.0	-	17.0	-	24.0	-	22.2	-
CPUE (total)	95.4	-	98.8	-	89.4	-	75.0	-	43.8	-
CPUE $\geq$ Stock	48.6	-	82.4	-	87.4	-	68.0	-	43.1	-
CPUE $\geq$ Preferred	16.8	-	-	-	15.0	-	16.4	-	9.6	-
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	92.0	-	95.8	-	87.3	-	90.7	-	85.5	-
Quality	94.0	-	96.5	-	89.8	-	89.8	-	85.9	-
Preferred	101.0	-	99.2	-	96.6	-	97.5	-	92.6	-
Memorable	101.0	-	98.7	-	100.9	-	99.6	-	99.6	-
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	-	-	1.42	2.08	-	-	-
Harvest Rate (intended)	-	-	-	-	-	0.42	0.00	-	-	-
% Released	-	-	-	-	-	78.6%	77.3%	-	-	-
Mean Weight	-	-	-	-	-	1.35	1.31	-	-	-

**Smallmouth Bass, Cordell Hull Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	1.20	-	0.60	-	0.00	-	-	-	-	-
CPUE (mid-summer seine)	0.80	-	-	0.10	-	0.00	0.10	0.10	0.10	0.30
<b>Density</b> (spring electrofishing)										
PSD	50.0	-	77.0	-	52.0	-	-	-	-	-
RSD (preferred)	38.0	-	19.0	-	43.0	-	-	-	-	-
CPUE (preferred)	-	-	-	-	1.2	-	-	-	-	-
CPUE (total)	4.4	-	5.8	-	4.6	-	1.8	-	1.6	-
CPUE $\geq$ Stock	3.2	-	5.6	-	4.6	-	-	-	-	-
CPUE $\geq$ Preferred	-	-	1.0	-	2.0	-	-	-	-	-
CPUE $\geq$ MLL (18-inches)	1.4	-	-	-	-	-	-	-	-	-
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	89.5	-	90.3	-	153.7	-	-	-	-	-
Quality	85.5	-	87.8	-	78.2	-	-	-	-	-
Preferred	89.9	-	89.3	-	80.9	-	-	-	-	-
Memorable	93.5	-	86.6	-	77.6	-	-	-	-	-
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	-	-	-	0.00	-	-	-
Harvest Rate (intended)	-	-	-	-	-	-	0.00	-	-	-
% Released	-	-	-	-	-	84.2%	22.3%	-	-	-
Mean Weight	-	-	-	-	-	1.50	3.40	-	-	-

**White Crappie, Cordell Hull Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014*	2015*
<b>Recruitment</b>										
Substock CPUE (Trap netting)	0.00	-	-	-	-	-	-	-	0.00	0.03
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	0.10	-
<b>Density (electrofishing)</b>										
PSD	-	-	96.0	-	-	-	-	-	81.5	99.4
RSD (preferred)	68.0	-	96.0	-	-	-	-	-	59.3	84.0
CPUE (total)	5.6	-	5.4	-	-	-	2.4	-	11.7	124.6
CPUE ≥ Stock	5.6	-	5.4	-	-	-	-	-	11.7	124.6
CPUE ≥ MLL (10-inches)	3.4	-	-	-	-	-	-	-	7.0	104.6
<b>Growth (electrofishing)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (electrofishing)</b>										
Stock	-	-	-	-	-	-	-	-	85.1	-
Quality	98.2	-	-	-	-	-	-	-	85.7	-
Preferred	91.2	-	-	-	-	-	-	-	87.1	-
Memorable	88.4	-	-	-	-	-	-	-	96.3	-
<b>Mortality (electrofishing)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure (creel)</b>										
Angler Hours (all crappie)	-	-	-	-	-	25,735	25,635	-	-	-
Angler Hours/Acre	-	-	-	-	-	2.2	1.84	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate (any crappie)	-	-	-	-	-	1.85	1.65	-	-	-
Harvest Rate (any crappie)	-	-	-	-	-	0.59	0.47	-	-	-
% Released (w hite crappie)	-	-	-	-	-	73.6%	64.2%	-	-	-
Mean Weight (w hite crappie)	-	-	-	-	-	0.86	0.76	-	-	-
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Crappie	-	-	-	-	-	\$111,020	\$63,170	-	-	-

Non-target sample unless otherwise noted.

\* - Targeted sample

**Black Crappie, Cordell Hull Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014*	2015*
<b>Recruitment</b>										
Substock CPUE (Trap netting)	-	-	-	-	-	-	-	-	0.00	0.00
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	0.50	0.10
<b>Density (electrofishing)</b>										
PSD	-	-	-	-	-	-	-	-	-	100
RSD (preferred)	-	-	-	-	-	-	-	-	-	45.5
CPUE (total)	-	-	-	-	-	-	0.4	-	0.4	42.3
CPUE $\geq$ Stock	-	-	-	-	-	-	-	-	-	100.0
CPUE $\geq$ MLL (10-inches)	-	-	-	-	-	-	-	-	-	19.2
<b>Growth (electrofishing)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (electrofishing)</b>										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality (electrofishing)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure (creel)</b>										
Angler Hours (all crappie)	-	-	-	-	-	25735.0	25,635	-	-	-
Angler Hours/Acre	-	-	-	-	-	2.2	1.84	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate (any crappie)	-	-	-	-	-	1.9	1.65	-	-	-
Harvest Rate (any crappie)	-	-	-	-	-	0.6	0.47	-	-	-
% Released (black crappie)	-	-	-	-	-	0.6	71.2%	-	-	-
Mean Weight (black crappie)	-	-	-	-	-	0.9	0.78	-	-	-
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Crappie	-	-	-	-	-	\$111,020	\$63,170	-	-	-

Non-target sample unless otherwise noted.

\* - Targeted sample

**Blacknose Crappie, Cordell Hull Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014*	2015*
<b>Recruitment</b>										
Substock CPUE (Trap netting)	-	-	-	-	-	-	-	-	0.00	-
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	0.40	0.10
<b>Density (electrofishing)</b>										
PSD	-	-	-	-	-	-	-	-	-	100
RSD (preferred)	-	-	-	-	-	-	-	-	-	0.3
CPUE (total)	-	-	-	-	-	-	0.6	-	0.4	15.4
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	100
CPUE ≥ MLL (10-inches)	-	-	-	-	-	-	-	-	-	4.6
<b>Growth (electrofishing)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (electrofishing)</b>										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality (electrofishing)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure (creel)</b>										
Angler Hours (all crappie)	-	-	-	-	-	25,735	25,635	-	-	-
Angler Hours/Acre	-	-	-	-	-	2.2	1.8	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate (any crappie)	-	-	-	-	-	2	1.65	-	-	-
Harvest Rate (any crappie)	-	-	-	-	-	0.6	0.47	-	-	-
% Released (blacknose crappie)	-	-	-	-	-	1	43.6%	-	-	-
Mean Weight (blacknose crappie)	-	-	-	-	-	0.9	0.77	-	-	-
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Crappie	-	-	-	-	-	\$111,020	\$63,170	-	-	-

Non-target sample unless otherwise noted.

\* - Targeted sample

**Bluegill, Cordell Hull Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (Trap netting)	-	-	-	-	-	-	-	-	6.3	0.9
CPUE (mid-summer seine)	92.8	48.6	13.9	9.8	107.3	8.3	30.8	22.9	56.9	87.4
<b>Angling Pressure (creel)</b>										
Angler Hours (all sunfish)	-	-	-	-	-	5,311	13,379	-	-	-
Angler Hours/Acre	-	-	-	-	-	0.44	1.0	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate (any sunfish)	-	-	-	-	-	2.65	1.25	-	-	-
Harvest Rate (any sunfish)	-	-	-	-	-	0.90	0.90	-	-	-
% Released (bluegill)	-	-	-	-	-	78.2%	23.1%	-	-	-
Mean Weight (bluegill)	-	-	-	-	-	0.30	0.29	-	-	-
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Sunfish	-	-	-	-	-	\$28,000	\$40,050	-	-	-

**Sauger, Cordell Hull Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (gill netting)	-	-	-	-	0.00		0.00	-	-	-
CPUE (midsummer seine)	0.80	0.30	-	0.00	0.00	0.00	0.00	0.00	-	-
<b>Density (gill netting)</b>										
PSD	-	-	-	-	100.0	-	-	-	-	-
RSD (preferred)	-	-	-	-	70.0	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	0.3	-	-	-
CPUE $\geq$ Stock	-	-	-	-	-	-	-	-	-	-
CPUE $\geq$ MLL (15-inches)	-	-	-	-	-	-	-	-	-	-
<b>Growth (gill netting)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (gill netting)</b>										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality (gill netting)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure (creel)*</b>										
Angler Hours	-	-	-	-	-	19,322	25,396	-	-	-
Angler Hours/Acre	-	-	-	-	-	1.62	1.82	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate (intended)	-	-	-	-	-	0.56	0.80	-	-	-
Harvest Rate (intended)	-	-	-	-	-	0.22	0.35	-	-	-
% Released	-	-	-	-	-	58.2%	41.1%	-	-	-
Mean Weight	-	-	-	-	-	1.53	1.95	-	-	-
<b>Value of Fishery (Trip Expenditures - creel)</b>										
Sauger	-	-	-	-	-	\$82,870	\$69,380	-	-	-

**Walleye, Cordell Hull Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-
CPUE (midsummer seine)	-	-	-	-	-	-	-	-	0.10	-
<b>Density (gill netting)</b>										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-
CPUE > Stock	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (16-inches)	-	-	-	-	-	-	-	-	-	-
<b>Growth (gill netting)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (gill netting)</b>										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality (gill netting)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	-	-	-	-	-	113,835	29,223
#/Acre	-	-	-	-	-	-	-	-	8.2	2.1
<b>Angling Pressure (creel)*</b>										
Angler Hours	-	-	-	-	-	-	-	-	-	-
Angler Hours/Acre	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate (intended)	-	-	-	-	-	-	-	-	-	-
Harvest Rate (intended)	-	-	-	-	-	-	-	-	-	-
% Released	-	-	-	-	-	-	-	-	-	-
Mean Weight	-	-	-	-	-	-	-	-	-	-
<b>Value of Fishery (Trip Expenditures - creel)</b>										
Walleye	-	-	-	-	-	-	-	-	-	-



**Catfish, Cordell Hull Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all catfish)	-	-	-	-	-	5,169	5,689	-	-	-
Angler Hours/Acre	-	-	-	-	-	0.43	0.4	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (any catfish)	-	-	-	-	-	0.10	0.16	-	-	-
Harvest Rate (any catfish)	-	-	-	-	-	0.10	0.16	-	-	-
% Released (channel)	-	-	-	-	-	9.1%	0.0%	-	-	-
Mean Weight (channel)	-	-	-	-	-	1.92	1.89	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Catfish	-	-	-	-	-	\$19,960	\$20,020	-	-	-

**Shad, Cordell Hull Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (electrofishing)										
Alewife CPUE	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	-	89.5	-	-	-	21.3	-	119.2	-
Threadfin CPUE	-	-	30.9	-	-	-	6.3	-	13.2	-

**Striped Bass, Cordell Hull Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	-	-	-	0.1	0	-	0	-	-
<b>Density (gill netting)</b>										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-
CPUE ≥ 15-inches	-	-	-	-	-	-	-	-	-	-
<b>Growth (gill netting)</b>										
Length Age-2	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (gill netting)</b>										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality (gill netting)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	79,887	154,772	60,168	119,185	92,205	81,977	107,825	75,559	86,015	47,161
#/Acre	5.74	11.12	4.32	8.56	6.62	5.89	7.75	5.43	6.17	3.40
<b>Angling Pressure (creel)</b>										
Angler Hours	-	-	-	-	-	364	2,495	-	-	-
Angler Hours/Acre	-	-	-	-	-	0.03	0.2	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate (intended)	-	-	-	-	-	0.87	0.00	-	-	-
Harvest Rate (intended)	-	-	-	-	-	0.49	0.00	-	-	-
% Released	-	-	-	-	-	30.5%	100.0%	-	-	-
Mean Weight	-	-	-	-	-	4.95	-	-	-	-
<b>Value of Fishery (Trip Expenditures - creel)</b>										
Striped Bass	-	-	-	-	-	\$3,840	\$14,200	-	-	-

**Habitat Enhancement, Cordell Hull Reservoir**

Type of Work	Details	Quantity	
		New	Renovated
none performed			

**Water Quality Monitoring, Cordell Hull Reservoir**

Parameter	Sampling Period	Water Quality
Temperature	none taken	none taken
Dissolved Oxygen	none taken	none taken
PH	none taken	none taken
Conductivity	none taken	none taken

### Dale Hollow Reservoir (2015 Annual Report)

#### Description

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**Area (acres):** 27,700      **Mean Depth (feet):**      **Shoreline (miles):** 620

**Counties:** Clay, Pickett, Overton, and Fentress Counties, TN also in Clinton and Cumberland Counties, KY.

**Full Pool Elevation (feet-msl):** 651      **Winter Pool Elevation (feet-msl):** 631

**Dam Completion: 1943**

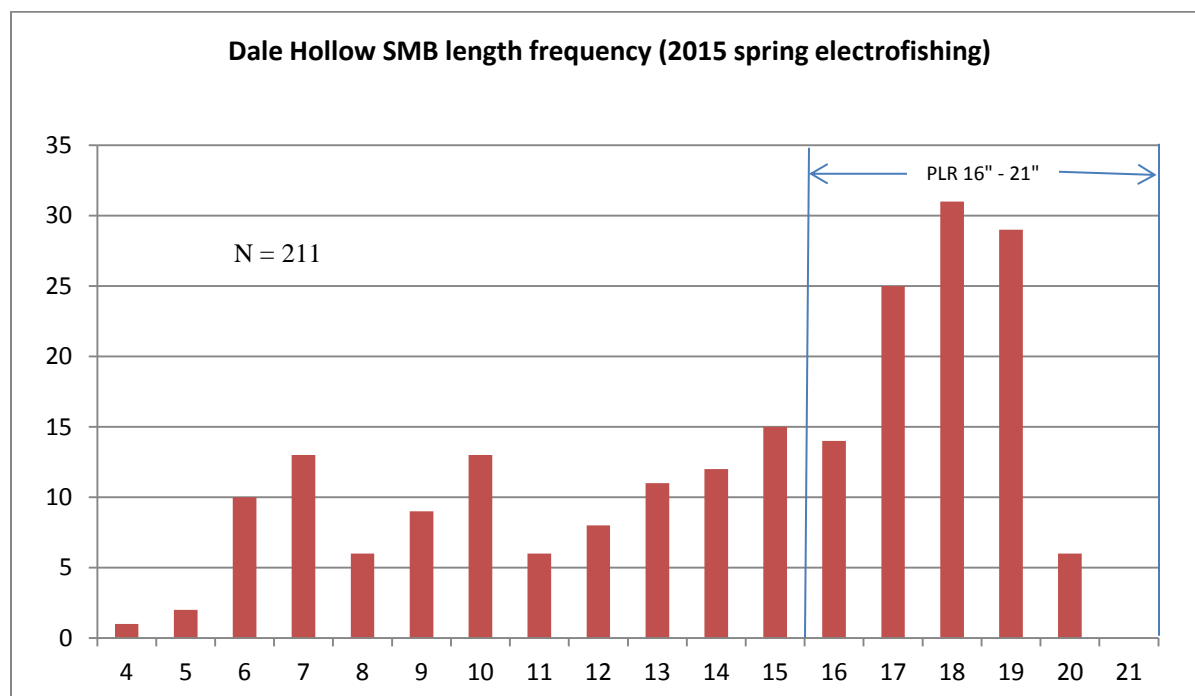
#### Summary:

Dale Hollow Reservoir was created in 1943 by the completion of Dale Hollow Dam on the Obey River near Celina. Dale Hollow covers 27,700 acres with 620 miles of shoreline. The operating authority is the U.S. Corp of Engineers. Dale Hollow encompasses Clay, Pickett, Overton, and Fentress counties in Tennessee and also Clinton and Cumberland counties in Kentucky. Because Dale Hollow has been the home of the famous world record smallmouth bass caught in 1955 by Mr. D. L. Hayes, much effort is applied by anglers nationwide seeking smallmouth bass fishing opportunities there.

**Largemouth bass (LMB):** Fishing success for largemouth bass has remained stable over the past years at Dale Hollow. There have been several reports of good stringers and nice sized LMB being weighed in at tournaments conducted at Dale Hollow Reservoir over the past couple of years. According to creel surveys in 2013, catch rates for LMB by anglers were the highest in the past ten years at an average catch rate of 0.86 lmb/hour. That same catch rate dropped to 0.47 in 2015. The average weight of harvested LMB in 2015 was 2.85 lbs, the second highest in the past ten years. The presence of various species of aquatic vegetation and available forage have greatly contributed in promoting and sustaining this fishery. Of concern through the years are the high values for PSD and RSD 15 values for LMB in Dale Hollow Reservoir which indicates a population heavily weighted by larger fish and possible recruitment problems. This unbalance as displayed by PSD and RSD values has been consistent in Dale Hollow over the past three decades. Results from the spring electrofishing surveys for LMB at Dale Hollow in 2015 were exceptional on many facets; the overall CPUE for LMB was 32.9 lmb/hour, this was the highest in the past ten years as was also the CPUE (23.3 lmb/hour) for LMB  $\geq 15"$ , the minimum length limit (MLL) for LMB at Dale Hollow. Substock CPUE was also the highest in the past ten years with a value of 1.37 lmb/hour. Of interest is also the data from the mid-summer seining surveys which are used to aid in evaluation of spawning success. In 2009, the highest recorded of 1.5 lmb/seine haul was recorded which was likely the large year class that has shown up in the past couple of years in creel surveys and tournament results. In 2015, this same data survey showed a value of 1.2 lmb/seine haul which is the third highest in the past ten years. Hopefully the right ingredients will be in place to facilitate these large year classes of LMB in successful spawning endeavors which would contribute greatly to the LMB fishery at Dale Hollow.

**Smallmouth bass (SMB):** Smallmouth bass fishing on Dale Hollow Reservoir continues to offer some of the best opportunities anywhere. According to the creel surveys conducted in 2015, catch rates for anglers were 0.41 smb/hour which is about average for Dale Hollow. The mid-summer seining surveys in 2013 yielded a 10 year high with a catch rate of 2.20 smb/seine haul, this same value was half that in 2015 (1.10 smb/seine haul). A targeted and regular spring electrofishing survey was conducted in 2015. From these surveys, CPUE for sub stock size smallmouth bass were the highest in ten years at 2.20

smb/hour. The size structure of smallmouth bass in Dale Hollow observed in 2013 electrofishing surveys offers great promise for strong year classes entering the 16-21" protected length range (PLR) currently in place at Dale Hollow. This SMB PLR regulation with a creel limit of 1 SMB allowed above 21" and one SMB allowed below 16" was instituted at Dale Hollow in the year 2000. Prior to this PLR, the regulation for SMB at Dale Hollow was an 18" MLL, 2 fish creel which was established in 1992. The graph below shows an abundance of SMB, collected during both targeted and regular spring electrofishing surveys in 2015, inside the PLR. This is a good illustration of the PLR achieving what it was intended to do. Also, the condition factors (Wrs) for all size classes of SMB observed were satisfactory.



Anglers at Dale Hollow Reservoir in pursuit of smallmouth bass spent an estimated \$649,400 on trip expenditures according to 2015 annual roving creel surveys.

**Spotted bass (SPB):** Catch rates for spotted bass obtained from creel surveys remain stable when compared to the ten year average. Mean weight (1.16 lbs) for harvested spotted bass was the lowest when compared to the last ten years at Dale Hollow. There is no minimum length limit on spotted bass currently at Dale Hollow. There are no reasons perceived that prevent the spotted bass fishery from offering consistent success as in years past. Catch rates for young of year spotted bass from summer seining efforts in 2015 showed a catch rate of 1.5 spb/seine haul which is the second lowest recorded in the last ten years. Not enough spotted bass were captured during the 2015 spring electrofishing surveys to generate any reputable data.

**Crappie:** White crappie populations in Dale Hollow Reservoir are not as prevalent as the black crappie populations, including blacknose crappie. Blacknose crappies (BNC) are stocked annually by TWRA into Dale Hollow. According to past surveys, white crappie was the dominant species of crappie in Dale Hollow in the early 1970's. It is estimated that crappie anglers expended an estimated \$100,480 in 2015 on Dale Hollow Reservoir in pursuit of crappie. According to those same creel surveys conducted in 2015, the catch rates by anglers for crappie were at a rate of 0.43 crappie/hour which is the lowest in the past

ten years. Crappie spawning success is very limited on Dale Hollow and that is not expected to change. Fall trapnetting is not a viable form of sampling due to the steep banks that are representative of Dale Hollow but conclusive evidence exists for poor crappie recruitment at Dale Hollow. Harvest reports obtained by roving creel surveys also reflect very poor consistency with crappie year classes. Crappie fishing success on Dale Hollow is expected to remain consistent however thanks to the continued annual stocking program of blacknose crappie by TWRA.

**Redear sunfish:** Fishing success for redear sunfish on Dale Hollow Reservoir remains good with some very nice fish being caught every year around the month of May. Reports with pictures from fishermen confirm the quality of the redear fishery here, often catching redear sunfish around and exceeding the one pound size. According to creel surveys; harvest rates and mean weights (0.51 lb. in 2015) associated with redear sunfish remain near average when compared to the last ten years. Catch rates by anglers showed an increase according to our creel surveys in 2014 and again in 2015 at 2.93 redear caught/hour.

**Bluegill:** Fishing success for bluegill should continue to be promising in Dale Hollow Reservoir. Mid-summer seining surveys showed low reproduction of bluegill in 2015 at 1.60 bluegill/seine haul, the lowest in the ten year average. Catch rates and harvest rates for “any sunfish” by anglers remain consistent according to annual roving creel surveys.

**Walleye:** The creel surveys in 2015 indicate that there was an estimated \$82,340 dollars expended by walleye anglers on Dale Hollow Reservoir. This figure is below the ten year average. Catch rates for walleye in 2015 were the second lowest recorded in the past ten years according to creel surveys at a rate of 0.16 walleye/hour. The average weight of harvested walleye was 3.39 lbs. Annual stockings of walleye have promoted consistency in successful year classes of walleye at Dale Hollow. In 2015, TWRA stocked 240,860 (8.7/acre) walleye fingerlings into Dale Hollow. Hopefully with some natural reproduction realized from lake and river spawning walleye populations and additional enhancement with stockings, fishing success in Dale Hollow should remain very good for walleye. Also ample forage bases comprised of threadfin and gizzard shad as well as alewife await walleye. Walleye support a very important fishery at Dale Hollow.

**Catfish:** Anglers in pursuit of catfish in Dale Hollow Reservoir compromise a smaller percentage of the intended angling public there. The overall success for catfish harvest remains consistent at Dale Hollow. The average weight of catfish captured in the 2015 creel survey was 5.54 lbs. Angling pressure for catfish is low when compared to other game fish within this reservoir.

**Muskie:** TWRA records show that TWRA personnel stocked “several” musky into Dale Hollow Reservoir between the years of 1952-1958 that were relocated from naturally occurring streams in Tennessee. Additionally, from 1958-1965 more musky were stocked into Dale Hollow that were acquired from Wisconsin. Despite there not being any other records of musky stockings at Dale Hollow since these reports, musky still exist in Dale Hollow today thus indicating a limited population existing by natural reproduction. Reports of anglers catching musky (typically large) do surface, typically caught while fishing for other species (i.e. trolling for walleye), and TWRA fisheries personnel have encounters via electrofishing from time to time with musky, but not often. Due to the small representation of musky at Dale Hollow, very little is known about population size, habitat preference and preferred spawning locations.

### Angler Attitude Surveys

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat and people, all of which are inner linked. Biologists are continually evaluating

this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. In an effort to accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions (see questionnaire in Appendix) in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, avg size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often times, minority user groups succeed in representing the sentiment of the angling public when actually it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

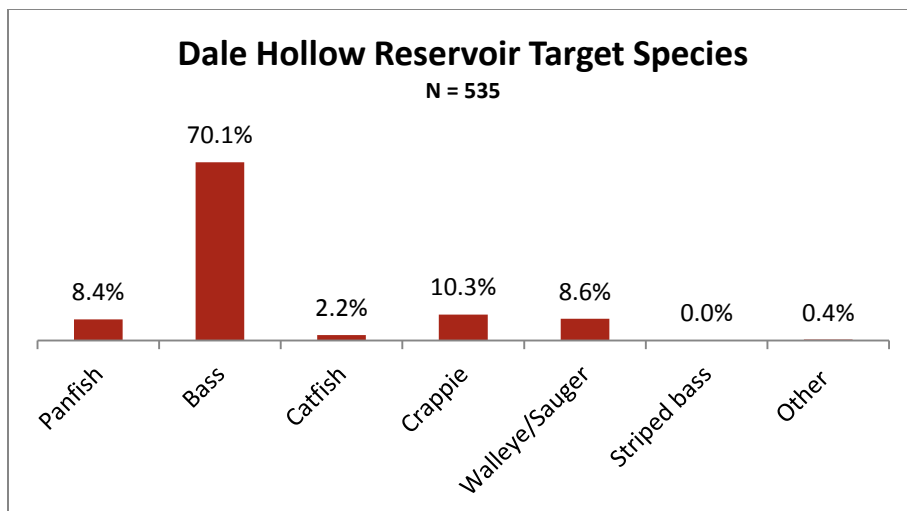
We sampled our angling public with attitude surveys again in 2015 on the four reservoirs in Region 3 that creel surveys were conducted (Center Hill, Chickamauga, Dale Hollow, and Watts Bar Reservoirs). Overall "approval" of Region 3 reservoirs in this 2015 survey is very favorable at the current time according to these 2015 surveys. We feel confident that this summary of our "angler attitudes" will once again provide insight to how these particular reservoirs are evaluated by our angling public. This type information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of our creel clerks (Danny Stone, Tim Poole) and the Region 3 reservoir fisheries crew.

Results from the Angler Attitude Survey conducted at Dale Hollow are as follows:

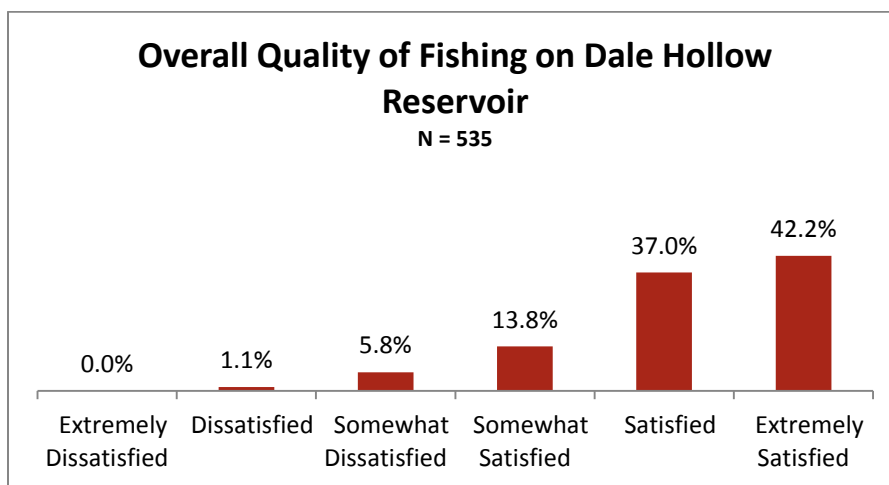
There were a total of 535 anglers fishing at Dale Hollow Reservoir, who had not been interviewed previously that year by a creel clerk, who participated in the 2015 angler attitude survey. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

The most targeted species of fish by anglers on Dale Hollow was bass (70.1%) with crappie being a distant second (10.3%), see graph below.



These surveys also revealed that fishermen who identified “Bass” (n=375) as their primary target species, 69.3% (260 bass anglers) of these bass anglers also fished bass tournaments. On average, these bass tournament fishermen at Dale Hollow Reservoir fished an average of 10.8 bass tournaments/year at Dale Hollow Reservoir. This is a very high bass tournament participation rate even when compared to other reservoirs in Region 3 like Chickamauga which is much larger than Dale Hollow and remains in the national spotlight for the excellent bass fishing realized there in recent years and a new state largemouth bass record caught there in 2015.

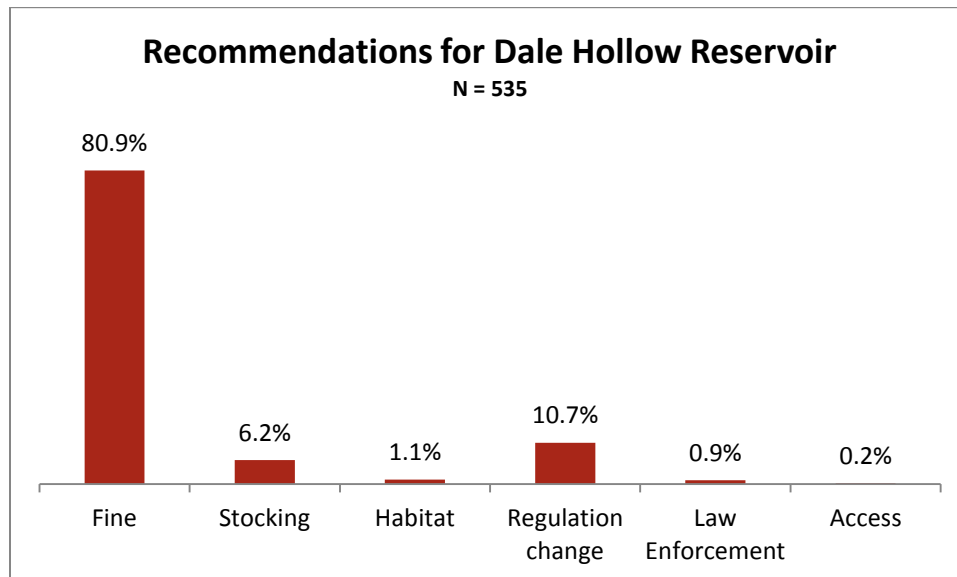
As the graph below depicts anglers expressed a high satisfaction rating (93%) overall when asked about the “overall quality of fishing on Dale Hollow Reservoir”.



According to the graph below, when anglers who fish Dale Hollow Reservoir were asked if they had any recommendations for the overall management of the fishery at Dale Hollow, the large majority (80.9%) had none indicating that everything was “fine”. “Regulation changes” was the category with the most recommendations and they were highly variable (i.e. SMB regulation changes, limit or ban bass



tournaments, restrictions for using the Alabama Rig fishing lure, etc.). Requests for stocking more walleye were also expressed. Walleye are currently stocked into Dale Hollow on an annual basis.



Overall, the angler attitudes obtained in 2015 from those fishing at Dale Hollow Reservoir are ones that exhibit a high approval for the current fish management of this reservoir by TWRA.

**Lakewide Angling Summary**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	406,030	380,868	335,407	376,584	334,592	353,631	368,307	298,648	283,231	269,329
Angler Hours Per Acre	17.5	16.5	14.6	16.3	14.4	15.1	16	12.8	12.2	11.6
Angler Trips	64,852	61,059	52,750	60,319	52,744	56,777	59,434	46,463	45,441	41,113
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	3,221,020	3,479,300	2,954,030	2,803,660	2,309,480	2,833,440	2,859,300	2,422,100	2,340,910	1,561,830

**Black bass, Dale Hollow Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	243,051	235,115	216,960	233,738	205,517	223,261	189,256	162,233	164,986	165,119
(hrs/acre)	10.50	10.13	9.35	10.08	8.86	9.62	8.16	6.99	7.11	7.12
Any Black Bass (hrs)	79,087	73,017	69,658	80,698	67,753	84,840	77,442	70,785	73,491	76,303
(hrs/acre)	3.41	3.15	3.00	3.48	2.92	3.66	3.34	3.05	3.17	3.29
Largemouth Bass (hrs)	1,007	2,295	2,736	1,676	1,872	4,399	2,407	3,669	7,889	6,240
(hrs/acre)	0.04	0.10	0.12	0.07	0.08	0.19	0.10	0.16	0.34	0.27
Smallmouth Bass (hrs)	162,636	159,490	144,566	151,266	135,722	133,899	109,407	87,779	83,042	82,576
(hrs/acre)	7.01	6.88	6.23	6.52	5.85	5.77	4.72	3.78	3.58	3.56
Spotted Bass (hrs)	321	313	-	98	170	123	-	-	564	-
(hrs/acre)	0.01	0.01	-	0.00	0.01	0.01	-	-	0.02	-
<b>Tournaments (all black bass)</b>										
# Tournaments (BITE)										
Pounds/Angler Day (BITE)										
Bass/Angler Day (BITE)										
Tournament Angler Hrs/Acre (creel)										
Tournament Catch Rate (creel)	0.22	0.38	0.33	0.18	0.38	0.62	0.49	0.53	0.67	0.62
Non-Tournament Catch Rate (creel)	0.35	0.47	0.30	0.29	0.39	0.51	0.47	0.33	0.44	0.38
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	\$1,542,140	\$1,588,010	\$2,267,080	\$2,123,640	\$1,688,400	\$2,138,230	\$1,197,550	\$1,125,410	\$1,132,180	\$1,235,620
Any Black Bass	\$432,830	\$444,800	\$751,010	\$678,140	\$444,780	\$683,980	\$413,300	\$451,700	\$404,960	\$558,230
Largemouth Bass	\$2,190	\$15,950	\$24,400	\$7,070	\$14,530	\$17,090	\$11,000	\$13,270	\$47,660	\$27,990
Smallmouth Bass	\$1,106,230	\$1,126,270	\$1,491,670	\$1,437,840	\$1,228,100	\$1,433,300	\$773,250	\$660,440	\$679,010	\$649,400
Spotted Bass	\$890	\$990	-	\$590	\$990	\$3,860	-		\$550	-

**Largemouth Bass, Dale Hollow Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	-	0.20	-	0.00	-	-	-	-	-	1.37
CPUE (mid-summer seine)	0.50	0.20	0.60	1.50	0.80	0.40	0.00	1.30	0.40	1.20
<b>Density (spring electrofishing)</b>										
PSD	-	84.0	-	95.0	-	-	-	91.0	-	95.0
RSD (preferred)	-	47.0	-	68.0	-	-	-	61.0	-	73.9
CPUE (total)	-	15.0	-	3.8	-	-	-	24.6	-	32.9
CPUE $\geq$ Stock	-	14.8	-	3.8	-	-	-	24.6	-	31.6
CPUE $\geq$ MLL (15-inches)	-	6.8	-	2.6	-	-	-	18.5	-	23.3
<b>Growth (spring electrofishing)</b>										
Length Age-1					-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (spring electrofishing)</b>										
Stock	-	96.6	-	-	-	-	-	98.1	-	114.6
Quality	-	129.5	-	-	-	-	-	90.2	-	94.3
Preferred	-	94.3	-	-	-	-	-	88.7	-	92.2
Memorable	-	89.0	-	-	-	-	-	66.6	-	87.0
<b>Mortality (spring electrofishing)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate, num./hr (intended)	0.00	0.67	0.35	0.42	0.41	0.39	0.22	0.86	0.75	0.47
Catch Rate, num./hr (any black bass)	0.39	0.46	0.33	0.29	0.42	0.49	0.42	0.52	0.68	0.54
Harvest Rate, num./hr (any black bass)	0.08	0.11	0.10	0.06	0.05	0.09	0.07	0.07	0.16	0.12
% Released	73.1%	74.2%	77.1%	78.1%	89.1%	88.3%	81.0%	83.6%	80.2%	79.9%
Mean Weight	2.67	2.81	2.70	2.73	3.08	2.57	2.74	2.60	2.59	2.85

**Smallmouth Bass, Dale Hollow Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	-	1.20	-	1.60				0.95	-	2.20
CPUE (mid-summer seine)	1.40	1.40	1.40	0.70	1.60	1.90	0.40	2.20	0.90	1.10
<b>Density (spring electrofishing)</b>										
PSD	-	61.0	-	80.0	-	-	-	72.0	-	64.7
RSD (preferred)	-	23.0	-	58.0	-	-	-	53.0	-	45.5
CPUE (preferred)	-	-	-	5.8	-	-	-	3.1	-	1.8
CPUE (total)	-	14.6	-	11.6	-	-	-	23.8	-	21.6
CPUE $\geq$ Stock	-	13.2	-	10.0	-	-	-	22.9	-	19.4
CPUE $\geq$ Preferred	-	-	-	-	-	-	-	11.1	-	8.8
CPUE $\geq$ MLL (18-inches)	-	-	-	-	-	-	-	1.9	-	2.4
<b>Growth (spring electrofishing)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	274.0	-	-
<b>Condition (spring electrofishing)</b>										
Stock	-	89.3	-	-	-	-	-	96.2	-	112.2
Quality	-	92.4	-	-	-	-	-	82.1	-	88.9
Preferred	-	91.2	-	-	-	-	-	78.0	-	81.9
Memorable	-	87.4	-	-	-	-	-	77.7	-	77.9
<b>Mortality (spring electrofishing)</b>										
Total Mortality	-	-	-	-	-	-	-	41.0%	-	-
<b>Fishing Success (creel)</b>										
Catch Rate, num./hr (intended)	0.33	0.46	0.33	0.29	0.36	0.50	0.46	0.25	0.39	0.41
Catch Rate, num./hr (any black bass)	0.39	0.46	0.33	0.29	0.42	0.49	0.42	0.52	0.68	0.54
Harvest Rate, num./hr (any black bass)	0.08	0.11	0.10	0.06	0.05	0.01	0.07	0.07	0.16	0.12
% Released	73.1%	74.2%	77.1%	96.9%	95.3%	95.8%	94.3%	95.1%	97.4%	97.6%
Mean Weight	2.67	2.81	2.70	2.44	2.34	1.82	2.00	1.62	2.14	2.03

**Smallmouth Bass (Targeted), Dale Hollow Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE						0.54	-	0.95	-	0.30
<b>Density</b> (electrofishing)										
PSD						94	-	85	-	94
RSD (preferred)						70.0	-	52.0	-	87.9
CPUE (preferred)						6.4	-	2.4	-	0.4
CPUE (total)						9.2	-	29.4	-	13.3
CPUE $\geq$ Stock						9.2	-	28.4	-	13.0
CPUE $\geq$ Preferred						6.4	-	14.4	-	11.5
<b>Growth</b> (electrofishing)										
Length Age-1						-	-	-	-	-
Length Age-3						-	-	277.0	-	-
<b>Condition</b> (electrofishing)										
Stock						95.4	-	81.5	-	118.4
Quality						92.0	-	81.8	-	87.9
Preferred						94.7	-	87.8	-	92.3
Memorable						95.1	-	86.8	-	85.7

**Spotted Bass, Dale Hollow Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	-	0.60	-	1.20	-	-	-	-	-	-
CPUE (mid-summer seine)	0.70	1.70	4.80	1.70	1.70	2.90	0.00	3.40	2.00	1.50
<b>Density (spring electrofishing)</b>										
PSD	-	70.0	-	12.0	-	-	-	-	-	-
RSD (preferred)	-	29.0	-	5.0	-	-	-	-	-	-
CPUE (total)	-	13.5	-	7.8	-	-	-	4.4	-	-
CPUE $\geq$ Stock	-	11.8	-	6.8	-	-	-	-	-	-
<b>Growth (spring electrofishing)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (spring electrofishing)</b>										
Stock	-	100.5	-	-	-	-	-	-	-	-
Quality	-	103.7	-	-	-	-	-	-	-	-
Preferred	-	101.3	-	-	-	-	-	-	-	-
<b>Mortality (spring electrofishing)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate, num./hr (intended)	0.00	1.79	N/A	0.00	0.33	5.56	N/A	N/A	0.56	-
Catch Rate, num./hr (any black bass)	0.39	0.46	0.33	0.29	0.42	0.49	0.42	0.52	0.68	0.54
Harvest Rate, num./hr (any black bass)	0.08	0.11	0.10	0.06	0.05	0.09	0.07	0.07	0.16	0.12
% Released	73.1%	74.2%	77.1%	64.3%	67.7%	69.5%	55.6%	79.8%	72.9%	78.1%
Mean Weight	2.67	2.81	2.70	1.55	1.28	1.38	1.36	1.48	1.30	1.16

**Black Crappie, Dale Hollow Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	-	-	-	-	-	-	-	-	-	-
<b>Density</b> (electrofishing)										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-
CPUE $\geq$ Stock	-	-	-	-	-	-	-	-	-	-
CPUE $\geq$ MLL (10-inches)	-	-	-	-	-	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	49,442	39,224	32,267	33,847	43,254	44,467	41,981	26,502	30,968	33,702
Angler Hours/Acre	2.13	1.69	1.39	1.46	1.86	1.92	1.81	1.14	1.34	1.45
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.24	0.96	0.89	0.83	1.08	1.61	1.01	1.06	0.86	0.43
Harvest Rate (any crappie)	0.68	0.55	0.33	0.45	0.39	0.57	0.39	0.38	0.44	0.15
% Released (black crappie)	42.0%	23.2%	56.7%	35.9%	44.5%	58.7%	60.4%	67.7%	37.8%	72.7%
Mean Weight (black crappie)	1.12	1.06	1.00	1.16	1.00	0.98	1.06	0.94	0.95	1.01
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$220,270	\$175,720	\$183,200	\$144,230	\$196,230	\$229,760	\$131,770	\$91,450	\$99,790	\$100,480

Non-target sample unless otherwise noted.

**Blacknose Crappie, Dale Hollow Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	-	-	-	-	-	-	-	-	-	-
<b>Density</b> (electrofishing)										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-
CPUE > Stock	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (10-inches)	-	-	-	-	-	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	310,398	241,584	169,318	257,613	182,571	106,580	127,766	179,636	213,110	161,442
#/Acre	11.2	8.7	6.1	9.3	6.6	3.8	4.6	6.5	7.7	5.8
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	49,442	39,224	32,267	33,847	43,254	44,467	41,981	26,502	30,968	33,702
Angler Hours/Acre	2.13	1.69	1.39	1.46	1.86	1.92	1.81	1.14	1.34	1.45
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.24	0.96	0.89	0.83	1.08	1.61	1.01	1.06	0.86	0.43
Harvest Rate (any crappie)	0.68	0.55	0.33	0.45	0.39	0.57	0.39	0.38	0.44	0.15
% Released (blacknose crappie)	34.0%	26.9%	54.9%	42.1%	52.5%	56.8%	39.0%	48.4%	36.7%	55.2%
Mean Weight (blacknose crappie)	1.22	1.18	1.27	1.28	1.19	0.98	1.09	0.96	1.11	1.40
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$220,270	\$175,720	\$183,200	\$144,230	\$196,230	\$229,760	\$131,770	\$91,450	\$99,790	\$100,480

Non-target sample unless otherwise noted.



**White Crappie, Dale Hollow Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	-	-	-	-	-	-	-	-	-	-
<b>Density</b> (electrofishing)										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-
CPUE > Stock	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (10-inches)	-	-	-	-	-	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	49,442	39,224	32,267	33,847	43,254	44,467	41,981	26,502	30,968	33,702
Angler Hours/Acre	2.13	1.69	1.39	1.46	1.86	1.92	1.81	1.14	1.34	1.45
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.24	0.96	0.89	0.83	1.08	1.61	1.01	1.06	0.86	0.43
Harvest Rate (any crappie)	0.68	0.55	0.33	0.45	0.39	0.57	0.39	0.38	0.44	0.15
% Released (w hite crappie)	47.2%	56.0%	-	40.8%	63.9%	86.3%	62.1%	100.0%	100.0%	38.0%
Mean Weight (w hite crappie)	0.90	1.02	-	1.00	0.81	0.78	0.86	-	-	0.86
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$220,270	\$175,720	\$183,200	\$144,230	\$196,230	\$229,760	\$131,770	\$91,450	\$99,790	\$100,480

Non-target sample unless otherwise noted.

**Walleye, Dale Hollow Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (gill netting)	-	0.01	-	-	-	-	0.00	-	-	-
CPUE (mid-summer seine)	0.00	0.00	0.00	0.00	0.10	0.00	0.00	-	-	-
<b>Density (gill netting)</b>										
PSD	-	-	-	-	-	-	100	-	-	-
RSD (preferred)	-	23	-	-	-	-	60	-	-	-
CPUE (total)	-	0.8	-	-	-	-	0.8	-	-	-
CPUE ≥ Stock	-	0.8	-	-	-	-	0.8	-	-	-
CPUE ≥ MLL (16-inches)	-	0.8	-	-	-	-	0.8	-	-	-
<b>Growth (gill netting)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (gill netting)</b>										
Stock	-	99.7	-	-	-	-	98.9	-	-	-
Quality	-	101.0	-	-	-	-	97.8	-	-	-
Preferred	-	99.8	-	-	-	-	99.7	-	-	-
Memorable	-	99.1	-	-	-	-	93.2	-	-	-
<b>Mortality (gill netting)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	90,990	449,439	277,368	370,917	152,568	265,656	145,831	194,342	211,035	240,860
#/Acre	3.3	16.2	10.0	13.4	5.5	9.6	5.3	7.0	7.6	8.7
<b>Angling Pressure (creel)</b>										
Angler Hours	32,859	37,049	34,411	40,975	37,891	32,506	39,692	37,904	23,935	20,842
Angler Hours/Acre	1.42	1.60	1.48	1.77	1.63	1.40	1.71	1.63	1.03	0.90
<b>Fishing Success (creel)</b>										
Catch Rate (intended)	0.27	0.31	0.32	0.31	0.35	0.28	0.18	0.15	0.36	0.16
Harvest Rate (intended)	0.19	0.26	0.23	0.23	0.22	0.24	0.16	0.14	0.17	0.14
% Released	29.0%	15.3%	32.4%	27.1%	39.0%	15.8%	9.4%	8.2%	66.0%	9.3%
Mean Weight	4.30	3.26	3.65	3.50	3.02	3.28	3.53	3.71	4.22	3.39
<b>Value of Fishery (Trip Expenditures - creel)</b>										
Walleye	\$213,390	\$307,330	\$208,930	\$230,060	\$187,700	\$176,240	\$149,390	\$99,970	\$82,340	\$74,000

**Sunfish, Dale Hollow Reservoir****Bluegill**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
CPUE (mid-summer seine)	2.20	3.20	3.40	5.00	5.90	10.80	8.90	3.10	2.60	1.60
<b>Angling Pressure (creel)</b>										
Angler Hours (all sunfish)	24,081	17,160	21,051	23,134	24,384	25,256	42,960	45,167	33,221	22,756
Angler Hours/Acre	1.03	0.74	0.91	1.00	1.05	1.09	1.85	1.95	1.43	0.98
<b>Fishing Success (creel)</b>										
Catch Rate (any sunfish)	3.51	3.42	2.94	3.14	2.80	2.96	2.03	1.67	2.57	2.93
Harvest Rate (any sunfish)	2.28	2.35	1.97	2.26	1.87	1.80	1.47	1.08	1.64	2.03
% Released (bluegill)	36.1%	45.8%	40.0%	36.8%	43.8%	49.1%	32.6%	48.4%	55.0%	33.7%
Mean Weight (bluegill)	0.35	0.43	0.41	0.41	0.42	0.46	0.40	0.40	0.44	0.42
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Sunfish	\$70,960	\$114,270	\$102,920	\$96,120	\$79,580	\$112,210	\$147,400	\$198,260	\$64,550	\$64,960

**Redear**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
CPUE (mid-summer seine)	0.00	0.10	0.00	0.20	0.20	0.00	0.00	0.00	-	-
<b>Angling Pressure (creel)</b>										
Angler Hours (all sunfish)	24,081	17,160	21,051	23,134	24,384	25,256	42,960	45,167	33,221	22,756
Angler Hours/Acre	1.03	0.74	0.91	1.00	1.05	1.09	1.85	1.95	1.43	0.98
<b>Fishing Success (creel)</b>										
Catch Rate (any sunfish)	3.51	3.42	2.94	3.14	2.80	2.96	2.03	1.67	2.57	2.93
Harvest Rate (any sunfish)	2.28	2.35	1.97	2.26	1.87	1.80	1.47	1.08	1.64	2.03
% Released (redeer)	26.0%	19.2%	19.5%	14.4%	25.3%	26.0%	16.6%	23.1%	23.5%	22.0%
Mean Weight (redeer)	0.63	0.50	0.61	0.63	0.59	0.57	0.56	0.48	0.50	0.51
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Sunfish	\$70,960	\$114,270	\$102,920	\$96,120	\$79,580	\$112,210	\$147,400	\$198,260	\$64,550	\$64,960

**Catfish, Dale Hollow Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all catfish)	4,374	4,865	4,306	6,839	4,776	3,539	7,861	6,135	8,951	7,417
Angler Hours/Acre	0.19	0.21	0.19	0.30	0.21	0.15	0.34	0.26	0.39	0.32
<b>Fishing Success</b> (creel)										
Catch Rate (any catfish)	0.50	0.51	0.59	0.35	0.44	0.28	0.27	0.32	0.44	0.44
Harvest Rate (any catfish)	0.50	0.51	0.59	0.33	0.44	0.28	0.27	0.32	0.44	0.44
% Released (channel)	11.9%	2.6%	2.6%	11.1%	6.3%	2.6%	3.3%	0.9%	2.1%	1.8%
Mean Weight (channel)	3.77	4.29	4.86	4.62	4.23	4.77	4.99	4.20	5.24	5.54
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Catfish	\$10,870		\$22,780	\$26,630	\$14,470	\$11,110	\$14,770	\$16,060	\$27,040	\$20,240

**Muskie, Dale Hollow Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours	-	-	887	399	360	-	1,255	-	179	-
Angler Hours/Acre	-	-	0.03	0.01	0.01	-	0.05	-	0.01	-
<b>Fishing Success</b> (creel)										
Catch Rate	0.00	-	0.12	0.00	0.00	-	0.00	-	0.00	-
Harvest Rate	0.00	-	0.08	0.00	0.00	-	0.00	-	0.00	-
% Released	-	-	56.4%	-	N/A	-	N/A	-	100.0%	-
Mean Weight	-	-	24.00	-	N/A	-	N/A	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Muskie	\$5,770	-	\$12,120	\$6,660	\$2,810	-	\$6,710	-	\$420	-

**Shad, Dale Hollow Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (electrofishing)										
Alewife CPUE	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	26.7	-	-	-	-	-	-	45.0	-
Threadfin CPUE	-	65.3	-	-	-	-	-	-	-	-

**Habitat Enhancement, Dale Hollow Reservoir**

Type of Work	Details	Quantity	
		New	Renovated
Fish Attractor Work	Harvested cedar trees for placement around TWRA bouys	14	

**Water Quality Monitoring, Dale Hollow Reservoir**

Parameter	Sampling Period	Water Quality
Temperature	none performed	
Dissolved Oxygen		
PH		
Conductivity		

### Great Falls Reservoir (2015 Annual Report)

#### Description

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**Area (acres):** 2,110      **Mean Depth (feet):**      **Shoreline (miles):** 120

**Counties:** Warren, White and Van Buren

**Full Pool Elevation (feet-msl):** 805      **Winter Pool Elevation (feet-msl):** 778

**Dam Completion:** 1916

#### Summary:

For the first time an annual roving creel survey was conducted on Great Falls Reservoir in 2014. Although Great Falls is a small reservoir, it is a destination for many local anglers seeking black bass and crappie fishing opportunities. Because of Great Falls' narrow body and heavy influence on water levels by rain; year classes of black bass and crappie are highly susceptible to be compromised on an annual basis due to failed spawning success. Spring electrofishing and mid-summer seining surveys help TWRA monitor gamefish populations at Great Falls.

**Largemouth bass (LMB):** Highly variable water level fluctuations in the spring at Great Falls will continue to be of concern and a limiting factor for favorable spawning conditions. Electrofishing survey results conducted in 2015 revealed the lowest catch rate (4.0 lmb/hour) of sub-stock LMB when compared to the past ten years. Mid-summer seining surveys conducted in 2015 also exhibited low CPUEs which were 8.50 lmb/seine haul. Both of these surveys are good indicators of consecutive years of poor year classes. Spring electrofishing surveys conducted in 2015 revealed an overall CPUE of 44.5 lmb/hour which was the highest observed in the past ten years. From this same survey the CPUE was 7.3 lmb/hour, also the highest in this same time frame. Additionally, PSD and RSD15 values have consistently remained in the desired range(s) over the past ten years confirming a LMB population that is in balance. The conditions factors (WRs) for LMB were satisfactory as well depicting an ample forage base. Good shoreline habitat (woody debris) and ample forage have also help promote the LMB fishery at Great Falls. The recently implemented 15" minimum length limit (MLL) established in 2011 will hopefully offset perceived increases in fishing pressure at Great Falls. Thanks to the creel survey conducted in 2014, there is now baseline data established that we can compare to in the future regarding pressure and other measures. According to this 2014 creel survey, the mean weight for largemouth bass caught by anglers was 1.92 lbs with an average catch rate of 0.49 bass/hour for "any black bass". Largemouth bass fishing in Great Falls Reservoir should remain fair to good in the upcoming years. The next spring electrofishing surveys are scheduled for 2017 and are typically conducted every other year for black bass surveys.

**Smallmouth bass (SMB):** There are not enough smallmouth bass in Great Falls Reservoir to warrant any reporting at this time.

**Spotted Bass (SPB):** Fishing for spotted bass in Great Falls Reservoir is probably not an intended species due to small population numbers when compared to largemouth bass population numbers there. The mid-summer seining surveys indicate good years of reproduction in 2008, 2009, and 2010. Unfortunately, these same mid-summer seining surveys showed very low catch rates for young of the year spotted bass in the years 2011-2013 as well and no catches in 2014. However in 2015, SPB were collected in these seining surveys at a rate of 14.0 spb/seine haul. Highly variable water level fluctuations in the spring at Great Falls will continue to be of concern and a limiting factor for favorable spawning

conditions. Spring electrofishing surveys performed in 2015 had a ten year low CPUE at 5 spb/hour. This falls in line with the poor year classes previously observed from summer seining and spring electrofishing surveys. Data from the 2014 creel survey shows that the mean weight of harvested spotted bass from Great Falls was 0.91 lbs.

**Crappie:** Crappie fishing success remains stable on Great Falls Reservoir. White crappie are the dominant species of crappie in Great Falls. A targeted electrofishing survey for crappie was conducted in 2014. Abundance and condition factors were favorable for crappie surveyed. The 2014 creel survey showed that on average anglers caught crappie at an average of 1.15 crappie/hour with the mean weight being 0.91 lbs. Anglers also expended \$27,610 in trip expenditures in pursuit of crappie at Great Falls in 2014.

Blacknose black crappie (BNC) has been stocked into Great Falls Reservoir since the year 2011 until 2014 and this project was evaluated in 2014 by electrofishing and roving creel surveys. The creel survey in 2014 and electrofishing surveys yielded no BNC despite those recent stockings. Therefore, hopes of establishing a BNC fishery at Great Falls via stocking and also a great potential BNC brood source have been unfounded. Due to the unrealized presence of BNC no more requests for BNC stocking allocations will be submitted.

**Bluegill:** A high occurrence of young of the year bluegill was realized in the 2013, 2014, and 2015 mid-summer seining samples. However, it is not expected for Great Falls Reservoir to be a top destination for bluegill fishermen due to logistics and nearby larger reservoirs (i.e. Center Hill). A catch rate by anglers of 1.76 sunfish/hour with an average weight of 0.34 lb. was realized in 2014 according to creel surveys.

**Walleye:** Walleye were stocked several years ago (2005 and previous) by TWRA into Great Falls Reservoir. Gill netting surveys geared at evaluating this project never realized any walleye. No confirmed catches of walleye by anglers have been confirmed at Great Falls reservoir either according to the 2014 creel survey conducted there.

**Catfish:** Angler effort and catch rates were both low in regards to catfish on Great Falls Reservoir according to the 2014 creel surveys. Both channel catfish and flathead catfish can be anticipated for the catch while pursuing catfish at Great Falls.

**Lakewide Angling Summary**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours									36,448	-
Angler Hours Per Acre									17.3	-
Angler Trips									7,947	-
<b>Value of Fishery (angler expenditures creel)</b>										
All Species									91,070	-

**Black Bass, Great Falls Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014*	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	-	-	-	-	-	-	-	-	13,181	-
(hrs/acre)	-	-	-	-	-	-	-	-	6.25	-
Any Black Bass (hrs)	-	-	-	-	-	-	-	-	12,768	-
(hrs/acre)	-	-	-	-	-	-	-	-	6.05	-
Largemouth Bass (hrs)	-	-	-	-	-	-	-	-	413	-
(hrs/acre)	-	-	-	-	-	-	-	-	0.20	-
Smallmouth Bass (hrs)	-	-	-	-	-	-	-	-	-	-
(hrs/acre)	-	-	-	-	-	-	-	-	-	-
Spotted Bass (hrs)	-	-	-	-	-	-	-	-	-	-
(hrs/acre)	-	-	-	-	-	-	-	-	-	-
<b>Tournaments (all black bass)</b>										
# Tournaments (BITE)	-	-	-	-	-	-	-	-	-	-
Pounds/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-
Bass/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-
Tournament Angler Hrs/Acre (creel)	-	-	-	-	-	-	-	-	-	-
Tournament Catch Rate (creel)	-	-	-	-	-	-	-	-	0.5	-
Non-Tournament Catch Rate (creel)	-	-	-	-	-	-	-	-	0.5	-
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	-	-	-	-	-	-	-	-	\$40,210	-
Any Black Bass	-	-	-	-	-	-	-	-	\$39,160	-
Largemouth Bass	-	-	-	-	-	-	-	-	\$1,050	-
Smallmouth Bass	-	-	-	-	-	-	-	-	-	-
Spotted Bass	-	-	-	-	-	-	-	-	-	-

\*Year-long creel begins



**Largemouth Bass, Great Falls Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	-	18.50	-	21.20	-	7.25	-	7.00	-	4.00
CPUE (mid-summer seine)	16.50	3.50	0.00	63.00	27.00	0.50	0.00	-	-	8.50
<b>Density</b> (spring electrofishing)										
PSD	-	45	-	61	-	54	-	54	-	63.6
RSD (preferred)	-	5.0	-	13.0	-	16.0	-	12.0	-	17.9
CPUE (total)	-	17.5	-	34.8	-	31.8	-	32.3	-	44.5
CPUE $\geq$ Stock	-	14.0	-	13.5	-	24.5	-	25.3	-	40.5
CPUE $\geq$ MLL (15-inches)	-	1.8	-	1.8	-	4.0	-	3.0	-	7.3
<b>Growth</b> (spring electrofishing)										
Length Age-1					-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	-	86.4	-	94.3	-	94.5	-	93.0	-	86.6
Quality	-	87.2	-	94.5	-	88.5	-	86.1	-	90.6
Preferred	-	85.0	-	91.2	-	87.9	-	83.7	-	91.4
Memorable	-	-	-	110.4	-	-	-	89.7	-	90.9
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	-	-	-	-	-	-	-	-	0.29	-
Catch Rate, num./hr (any black bass)	-	-	-	-	-	-	-	-	0.49	-
Harvest Rate, num./hr (any black bass)	-	-	-	-	-	-	-	-	0.08	-
% Released	-	-	-	-	-	-	-	-	91.4%	-
Mean Weight	-	-	-	-	-	-	-	-	1.92	-

**Spotted Bass, Great Falls Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	-	0.30	-	6.25	-	3.75	-	2.25	-	1.25
CPUE (mid-summer seine)	17.00	4.50	33.00	29.50	57.50	5.50	13.00	3.00	-	14.00
<b>Density</b> (spring electrofishing)										
PSD	-	25	-	25	-	43	-	38	-	26.7
RSD (preferred)	-	0.0	-	0.0	-	13.0	-	6.0	-	0.0
CPUE (total)	-	9.8	-	8.3	-	11.3	-	6.3	-	5.0
CPUE $\geq$ Stock	-	5.3	-	2.0	-	7.5	-	4.0	-	3.8
<b>Growth</b> (spring electrofishing)										
Length Age-1							-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	-	95.7	-	86.4	-	95.1	-	102.1	-	90.1
Quality	-	95.7	-	88.4	-	100.3	-	96.2	-	100.8
Preferred	-	98.1	-	-	-	87.1	-	41.8	-	-
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	-	-	-	-	-	-	-	-	-	-
Catch Rate, num./hr (any black bass)	-	-	-	-	-	-	-	-	0.49	-
Harvest Rate, num./hr (any black bass)	-	-	-	-	-	-	-	-	0.08	-
% Released	-	-	-	-	-	-	-	-	82.9%	-
Mean Weight	-	-	-	-	-	-	-	-	0.91	-

**White Crappie, Great Falls Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014*	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	-	-	-	-	-	-	-	-	-	-
<b>Density</b> (electrofishing)										
PSD	-	-	-	-	-	-	-	-	100	100.0
RSD (preferred)	-	-	-	-	-	-	-	-	88.3	77.8
CPUE (total)	-	-	-	-	-	-	-	4.5	31.8	6.8
CPUE $\geq$ Stock	-	-	-	-	-	-	-	-	31.8	6.8
CPUE $\geq$ MLL (10-inches)	-	-	-	-	-	-	-	-	28.1	5.3
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	-	99.9	91.7
Quality	-	-	-	-	-	-	-	-	108.7	90.3
Preferred	-	-	-	-	-	-	-	-	100.5	90.7
Memorable	-	-	-	-	-	-	-	-	96.2	93.9
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (any crappie)	-	-	-	-	-	-	-	-	1.15	-
Harvest Rate, num./hr (any crappie)	-	-	-	-	-	-	-	-	0.69	-
% Released (white crappie)	-	-	-	-	-	-	-	-	47.6%	-
Mean Weight (weight crappie)	-	-	-	-	-	-	-	-	0.91	-
<b>Value of Fishery</b> (Trip expenditures - creel)										
All Crappie	-	-	-	-	-	-	-	-	\$27,610	-

\*- Targetted crappie sample

**Black Crappie, Great Falls Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014*	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	-	-	-	-	-	-	-	-	-	-
<b>Density</b> (electrofishing)										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	1.0	4.1	2.8
CPUE $\geq$ Stock	-	-	-	-	-	-	-	-	-	-
CPUE $\geq$ MLL (10-inches)	-	-	-	-	-	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	-	-	26,880	22,800	23,328	-	-
#/Acre	-	-	-	-	-	14.7	12.5	12.7	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (any crap)	-	-	-	-	-	-	-	-	1.15	-
Harvest Rate, num./hr (any cra	-	-	-	-	-	-	-	-	0.69	-
% Released (black crappie)	-	-	-	-	-	-	-	-	37.5%	-
Mean Weight (black crappie)	-	-	-	-	-	-	-	-	1.01	-
<b>Value of Fishery</b> (Trip expenditures - creel)										
All Crappie	-	-	-	-	-	-	-	-	\$27,610	-

\*-Targetted crappie sample.

**Catfish, Great Falls Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all catfish)	-	-	-	-	-	-	-	-	1,536	-
Angler Hours/Acre	-	-	-	-	-	-	-	-	0.73	-
<b>Fishing Success</b> (creel)										
Catch Rate (any catfish)	-	-	-	-	-	-	-	-	0.04	-
Harvest Rate (any catfish)	-	-	-	-	-	-	-	-	0.04	-
% Released (channel)	-	-	-	-	-	-	-	-	0.0%	-
Mean Weight (channel)	-	-	-	-	-	-	-	-	4.17	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Catfish	-	-	-	-	-	-	-	-	\$1,690	-

**Sunfish, Great Falls Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
CPUE (mid-summer seine)	5.0	9.0	2.5	3.5	16.5	5.5	8.0	32.5	21.0	18.0
<b>Angling Pressure</b> (creel)										
Angler Hours (all sunfish)	-	-	-	-	-	-	-	-	2,890	-
Angler Hours/Acre	-	-	-	-	-	-	-	-	1.40	-
<b>Fishing Success</b> (creel)										
Catch Rate (any sunfish)	-	-	-	-	-	-	-	-	1.76	-
Harvest Rate (any sunfish)	-	-	-	-	-	-	-	-	1.00	-
% Released (bluegill)	-	-	-	-	-	-	-	-	38.1%	-
Mean Weight (bluegill)	-	-	-	-	-	-	-	-	0.34	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Sunfish	-	-	-	-	-	-	-	-	\$6,160	-

**Muskie, Great Falls Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Stocking</b>										
#	-	500	45	-	-	-	-	-	-	-
#/Acre	-	0.2	0.0	-	-	-	-	-	-	-

\*These fish were stocked per request by the Region 3 Streams Crew.

**Shad, Great Falls Reservoir**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density (electrofishing)</b>										
Alewife CPUE	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	27.0	-	96.9	-	-	-	-	-	-
Threadfin CPUE	-	4.3	-	53.8	-	-	-	-	-	-

**Habitat Enhancement, Great Falls Reservoir**

Type of Work	Details	Quantity	
		New	Renovated
none	none	none	none

**Water Quality Monitoring, Great Falls Reservoir**

Parameter	Sampling Period	Water Quality
Temperature	none performed	none performed
Dissolved Oxygen		
PH		
Conductivity		

### Guntersville Reservoir (2015 Annual Report)

#### Description

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**Area (acres):** 67,900 (~2,500 acres in TN)  
**(miles):** 949

**Mean Depth (feet):** 15

**Shoreline**

**Counties:** Marion County, TN, Marshall and Jackson in Alabama

**Total Fishing Effort (angler hours):** N/A

**Total Value by Anglers:** N/A

#### Summary:

**Largemouth bass:** Due to the riverine type environment present below Nickajack Dam (Guntersville headwaters) in the small TN section of this large reservoir, largemouth bass do not typically inhabit this for spawning purposes. This is further proven by our mid-summer seining surveys that have shown very low representation of young of the year (Y-O-Y) LMB in this section of the reservoir over the past ten years. However, anglers fishing for LMB should experience good success due to the abundance of forage (shad) typically present in this area. Electrofishing surveys conducted here in 2010 & 2012 showed fair catch rates for LMB. Another black bass electrofishing survey will be conducted in the fall of 2016.

**Smallmouth bass (SMB):** This particular tailwater is not expected to be a major destination for smallmouth bass fishing as are other tailwaters upstream on the TN River. SMB were represented in the mid-summer seining surveys at a rate of 2 smb/seine haul. Currently there is a one fish/18 inch minimum length limit on SMB in the TN section of Guntersville Reservoir. This regulation is consistent upstream along the TN River to Watts Bar dam thus incorporating Nickajack and Chickamauga Reservoirs.

**Spotted bass (SPB):** Based on recent surveys, fair success is expected for anglers in pursuit of spotted bass. The habitat in this section of Guntersville Reservoir should be conducive to spotted bass as are other TN River tailwater areas. Overall catch rates for SPB from electrofishing surveys in 2012 displayed an increase from that conducted in 2010. Spotted bass populations in neighboring TN reservoirs in Region 3 have been experiencing downward trends in population abundance according to spring electrofishing surveys and creel surveys. This may very well hold true for this section of Guntersville as well. However, in 2015 SPB were represented in higher numbers (6spb/seine haul) in the mid-summer seining surveys than over the past ten years. There is a possibility that the "spotted bass" collected could be the invasive Alabama bass that have been documented two reservoirs upstream in Chickamauga Reservoir.

**Crappie:** Guntersville (TN section) crappie regulations are reflective of the reservoir wide Alabama regulation of 30 fish/day at a minimum length limit (MLL) of 9 inches. In contrast, other reservoirs in Region 3 have a 10 inch MLL at 15 crappie/day creel limit. Since such a small section (~2500 acres) of Guntersville is in TN, there are no recommendations for crappie management in this section of Guntersville Reservoir.

**Bluegill:** As with most of the TN River, bluegill fishing remains stable and the same is expected in this section of Guntersville Reservoir. The Sequatchie River enters the TN River a short distance downstream of Nickajack Dam and presumably offers good sunfish fishing opportunities based on preferred habitat available up in the Sequatchie River which is navigable by boat. Rocky shorelines with laydowns on the main river below the dam also offer preferred habitat for a host of gamefish including bluegill.

**Sauger:** Variable reports of sauger fishing success are heard on a yearly basis. It is assumed that a limited sauger fishery will exist in this section of Guntersville Reservoir. Currently, there are no angler surveys to evaluate fishing pressure or success here. No stocking plans for sauger or walleye exists for this Guntersville headwater area at the current time.

**Catfish:** Where creel surveys are conducted on tailwater areas on the TN River in Region 3 (Ft. Loudon, Watts Bar and Chickamauga), catfish populations remain consistent as does fishing success. Due to the similarities in habitat and water quality at Nickajack tailwaters (Guntersville headwaters) compared to other noted TN tailwaters, the same expectations for catfishing success should be realized.

**Striped bass:** Reports of successful striped bass fishing trips are not that uncommon for anglers fishing the headwaters of Guntersville. Ample forage of shad and striped bass moving in this area through dam passage will probably keep a consistent fishery present here but probably on a very limited basis since the majority of contribution of striped bass would be dependent on stocking.

Based upon the fact that only approximately 2,500 acres of the 67,900 acres that make up Guntersville Reservoir are located in Tennessee, there are no management recommendations at this time for most gamefish. However, it is recommended that data collection surveys continue to be conducted as deemed necessary to survey the fish populations. Additionally, creel info would be helpful in evaluating angling pressure, target species and fishing success, etc. in this section of Guntersville.



**Largemouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (electrofishing)					2.00		2.00		-	
CPUE (mid-summer seine)	2.50	1.00	0.00	0.00	0.00	1.00	3.50	1.00	3.00	1.00
<b>Density (electrofishing)</b>										
PSD	-	-	-	-	87	-	67	-	-	-
RSD (preferred)	-	-	-	-	47.0	-	36.0	-	-	-
CPUE (total)	-	-	-	-	17.2	-	16.4	-	-	-
CPUE $\geq$ Stock	-	-	-	-	15.2	-	14.4	-	-	-
CPUE $\geq$ MLL (15-inches)	-	-	-	-	7.2	-	5.2	-	-	-
<b>Growth (electrofishing)</b>										
Length Age-1									-	-
Length Age-3									-	-
<b>Condition (spring electrofishing)</b>										
Stock					92.3		96.2		-	-
Quality					96.5		94.8		-	-
Preferred					96.0		94.3		-	-
Memorable					-		98.2		-	-

**Smallmouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (electrofishing)									-	
CPUE (mid-summer seine)	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.50	3.00	2.00
<b>Density (electrofishing)</b>										
PSD									-	-
RSD (preferred)									-	-
CPUE (preferred)									-	-
CPUE (total)					0.4		2.8		-	-
CPUE $\geq$ Stock									-	-
CPUE $\geq$ Preferred									-	-
CPUE $\geq$ MLL (18-inches)									-	-
<b>Growth (electrofishing)</b>										
Length Age-1									-	-
Length Age-3									-	-
<b>Condition (spring electrofishing)</b>										
Stock									-	-
Quality									-	-
Preferred									-	-
Memorable									-	-

**Spotted Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (electrofishing)							4.80		-	
CPUE (mid-summer seine)	0.00	1.50	0.00	0.00	0.00	0.50	1.50	1.00	0.00	6.00
<b>Density</b> (electrofishing)										
PSD							47		-	-
RSD (preferred)							23		-	-
CPUE (total)					6.8		16.8		-	-
CPUE $\geq$ Stock							12.0		-	-
<b>Growth</b> (electrofishing)										
Length Age-1									-	-
Length Age-3									-	-
<b>Condition</b> (spring electrofishing)										
Stock							96.9		-	-
Quality							92.6		-	-
Preferred							100.1		-	-

**Sauger**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Substock CPUE		0.10						-	-	-
<b>Density</b> (gill netting)										
PSD		100						-	-	-
RSD (preferred)		8						-	-	-
CPUE (total)		2.1						-	-	-
CPUE $\geq$ Stock		2.0						-	-	-
CPUE $\geq$ MLL (15-inches)		0.2						-	-	-
<b>Growth</b> (gill netting)										
Length Age-1								-	-	-
Length Age-3								-	-	-
<b>Condition</b> (gill netting)										
Stock		-						-	-	-
Quality		95.6						-	-	-
Preferred		103.9						-	-	-
Memorable		-						-	-	-
<b>Mortality</b> (gill netting)										
Total Mortality								-	-	-

### Nickajack Reservoir (2015 Annual Report)

#### Description

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**Area (acres):** 10,370      **Mean Depth (feet):**      **Shoreline (miles):** 179

**Counties:** Hamilton and Marion

#### Summary:

**Largemouth bass (LMB):** Spring black bass electrofishing surveys were conducted in Nickajack in 2014. These are typically conducted every other year on this reservoir. Thus the next electrofishing survey at Nickajack is scheduled for the spring of 2016.

Past spring electrofishing surveys have shown decreasing numbers of substock LMB as compared to high counts in the years 2002 and 2004. The overall CPUE for LMB in the 2014 (66.3 lmb/hour) collected from spring electrofishing surveys is also the lowest in the past ten years. Historically, Nickajack Reservoir has been categorized by high catch rates for LMB when compared to other Tennessee Reservoirs. A variety of suitable habitat (rocky shoreline, humps, woody debris) and sustained aquatic vegetation, most notably on the lower end of the reservoir, has provided an environment favorable to LMB as well as other fish species. Although, slight concerns exist regarding perceived low recruitment, good fishing success for LMB is expected in Nickajack Reservoir at the current time. Currently there is a 15 inch minimum size limit (MLL) for LMB at Nickajack Reservoir with a daily creel limit of 5, which is also the statewide regulation for LMB.

In 2015 a Florida largemouth bass (FLMB) stocking program was launched in Nickajack Reservoir. There were three main stocking sites (Sullivan's Bend, Rankin Cove-Marion Co. Park, and Nickajack Cave embayment) selected and annual stockings will be repeated for the next several years at these locations. These sites are located in the lower end of the reservoir where water is more sluggish and aquatic vegetation presence and other favorable bass habitat is the best. Ongoing data surveys (i.e. electrofishing, genetics, and creel) will be conducted during this project to evaluate its success. There were a total of 91,052 FLMB fingerlings stocked into Nickajack in 2015 amongst the 3 sites described.

**Smallmouth bass (SMB):** In spring black bass electrofishing surveys, smallmouth bass are represented at a minimal presence, if at all, at historic electrofishing sites on the lower end of Nickajack Reservoir. However, near the headwaters (Chickamauga tailwaters) of Nickajack Reservoir, several smallmouth bass are caught by anglers, with some being of the trophy status, as well as observed during electrofishing surveys there. This riverine environment with rocky habitat and ample amounts of forage, have proven to be conducive to a good and sustainable smallmouth bass fishery in this tailwater. Excellent fishing opportunities exist in this section of the reservoir basically year around, peaking in the cooler months. The Region 3 Reservoir crew specifically conducts data surveys in this tailwater area to better evaluate the smallmouth bass fishery in Nickajack and other species present.

**Spotted bass (SPB):** According to our bi-annual electrofishing surveys on Nickajack Reservoir, spotted bass numbers have declined, especially on the lower end of the reservoir when compared to the last ten years of data. This is also true for other reservoirs on the TN River within Region 3. For example, overall

CPUE from the electrofishing surveys have went from a high of 34 spb/hour in the year 2002 to a low representation of 4 spb/hour in 2010, 1 spb/hour in 2012 and zero in 2014 on Nickajack Reservoir. There are no obvious reasons for this steady decrease over the past decade. However, water flows and shifts in preferred and available habitat may have warranted some overall movements and locations of spotted bass. The delayed summer pool fill (one month later - May 15 instead of the previous April 15) of TN River reservoirs in Region 3 as part of a decision by TVA and their Reservoir Operations Study (ROS) may be a good candidate for negatively affecting spotted bass spawning success. This ROS plan was instituted in 2008. Electrofishing surveys are also conducted at the Nickajack headwaters (Chickamauga tailwaters) where a fair presence of spotted bass still exists. Anglers targeting spotted bass should concentrate in this area in the upper section of the reservoir. Currently there is a more liberal 15 spotted bass/day creel limit, no MLL in a specified area on the upper end of Nickajack Reservoir (Chickamauga Dam downstream to mouth of South Chickamauga Creek). This regulation was originally proposed by smallmouth bass anglers in this area who felt that the spotted bass were negatively affecting smallmouth bass there due to out competing and over abundance.

**Crappie:** A sustainable crappie population continues to exist in Nickajack Reservoir. The best suitable habitat for crappie is found towards the lower end of the reservoir where the water is more sluggish and more woody debris habitat can be found. Fair to good fishing for crappie is expected annually at Nickajack. For the first time, fall trapnetting surveys were conducting at Nickajack Reservoir in the fall of 2014 where both white and black crappie were represented. The substock CPUE for both were very similar with black crappie being 1.60 BC/net night and white crappie at 1.53 WC/net night. According to the last roving creel surveys conducted in 2012 on Nickajack, the catch rate by anglers in pursuit of crappie on Nickajack was very good at 4.21 crappie/hour.

**Redear:** The redear sunfish population in Nickajack continues to provide great opportunities for anglers. An electrofishing survey in 2010 showed a good population of redear sunfish distributed from the 4 to 10 inch range and this holds true currently. The bulk of the population is typically in the 7 to 9 inch length distributions. Several areas of suitable spawning habitat and desired food coexist in the reservoir yielding to successful year classes of redear sunfish. According to a roving creel survey conducted in 2011 the average catch rate for "sunfish" (redear/bluegill) was 5 fish/hour but down in 2012 to 2.18 fish/hour. Redear presence in the 2014 mid-summer seining surveys were low at 0.30 redear/seine haul and again in 2015 at 0.50 redear/seine haul. However, fall trapnetting conducted in 2014 realized a catch rate of 134.5 redear/net night. Continued excellent opportunities should exist with those anglers in pursuit of redear sunfish.

**Bluegill:** There is an excellent population of bluegill in Nickajack Reservoir. Mid-summer seining surveys are usually dominated by bluegill. However, in the mid-summer seining samples conducted in 2014 bluegill catch rates were at a decade low at 1.30 bluegill/seine haul but still higher than redear sunfish for this same survey. In 2015, bluegill bounced back in these summer seining surveys to a CPUE of 7.80 bluegill/seine haul but still remain low as compared to ten years of these surveys. Fall trapnetting surveys conducted in 2014 targeting crappie showed a bluegill presence of 22.75 bluegill/net night which is a much lower representation than that of redear sunfish from the same collection. Angler pursuit and success for bluegill here are expected to remain consistent. Multiple areas of bluegill habitat

exist in Nickajack Reservoir, reservoir wide. Bluegill are highly recorded as a fish for consumption by anglers who fish Nickajack from the boat as well as bank fishermen.

**Sauger:** Sauger are not stocked in Nickajack Reservoir at the current time nor have they been in many years. Sauger do exist in Nickajack and it is also known that sauger migrate via dam passage between reservoirs. Neighboring Chickamauga Reservoir (upstream) has received sauger stockings in the past but not currently due to a switch to a walleye stocking project. Successful propagation in the hatchery system and therefore availability is the biggest limitation for including Nickajack Reservoir with annual stockings of sauger. Without a consistent creel survey, it is impossible to determine current angling success rate with sauger anglers. Due to the necessity of sustaining sauger populations being augmented with annual stockings, fishing success in Nickajack Reservoir would be predicted to be limited. Reports of walleye catches are becoming more common on the upper reaches of Nickajack most likely influenced by walleye stockings in neighboring Chickamauga Reservoir upstream. Walleye stockings in Nickajack would likely be a better alternative to sauger stockings due to the success of propagation in statewide hatcheries. More validity will be given to this concept as other walleye stocking projects are evaluated in other mainstem (TN River) reservoirs in Region 3 that are currently being stocked with walleye (i.e. Watts Bar and Chickamauga).

**Catfish:** Although there is not much data to evaluate the catfish fishery within Nickajack Reservoir, fishing reports are consistent in reference to the success of this fishery. Several guides and anglers can be observed in pursuit of catfish on Nickajack Reservoir. Blue, channel, and flathead catfish all call Nickajack Reservoir home. As with other Tennessee Reservoirs in this region of the state, fishing success for catfish and angler pursuit is expected to remain favorable. In 2012, catfish anglers expended an estimated \$74,190 in pursuit of catfish while experiencing an average catch rate of 1.40 catfish/hour according to roving creel surveys.

**Striped bass:** A striped bass fishery exists in Nickajack Reservoir despite the fact that they are not stocked there. Migration of striped bass through dams from reservoirs that have striped bass stocking programs can explain this existence (i.e. Chickamauga and Watts Bar Reservoirs upstream). Also possibly a limited amount of natural reproduction may occur during years with appropriate flow within Nickajack's long riverine habitat. Ample forage bases of shad and skipjack, especially in the headwater section, help nourish and sustain striped bass present there. Success in regards to angling for striped bass is expected at Nickajack Reservoir but likely will not be as productive as stocked reservoirs. The management recommendation for the shad population is to monitor forage base in conjunction with bi-annual spring black bass electrofishing surveys as deemed necessary.

**Black Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	-	-	-	-	-	119,971	71,948	-	-	-
(hrs/acre)	-	-	-	-	-	11.57	6.94	-	-	-
Any Black Bass (hrs)	-	-	-	-	-	117,844	71,948	-	-	-
(hrs/acre)	-	-	-	-	-	11.36	6.94	-	-	-
Largemouth Bass (hrs)	-	-	-	-	-	2,127	-	-	-	-
(hrs/acre)	-	-	-	-	-	0.21	-	-	-	-
Smallmouth Bass (hrs)	-	-	-	-	-	-	-	-	-	-
(hrs/acre)	-	-	-	-	-	-	-	-	-	-
Spotted Bass (hrs)	-	-	-	-	-	-	-	-	-	-
(hrs/acre)	-	-	-	-	-	-	-	-	-	-
<b>Tournaments (all black bass)</b>										
# Tournaments (BITE)	-	1	-	-	-	-	-	-	-	-
Pounds/Angler Day (BITE)	-	4.1	-	-	-	-	-	-	-	-
Bass/Angler Day (BITE)	-	2.6	-	-	-	-	-	-	-	-
Tournament Angler Hrs/Acre (creel)	-	-	-	-	-	-	-	-	-	-
Tournament Catch Rate (creel)	-	-	-	-	-	0.86	0.60	-	-	-
Non-Tournament Catch Rate (creel)	-	-	-	-	-	0.79	0.92	-	-	-
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	-	-	-	-	-	\$1,146,810	\$208,660	-	-	-
Any Black Bass	-	-	-	-	-	\$1,143,160	\$208,660	-	-	-
Largemouth Bass	-	-	-	-	-	\$3,650	-	-	-	-
Smallmouth Bass	-	-	-	-	-	-	-	-	-	-
Spotted Bass	-	-	-	-	-	-	-	-	-	-

**Largemouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	8.00	-	9.30	-	-	-	8.50	-	0.67	
CPUE (mid-summer seine)	1.30	3.00	2.80	1.30	2.30	1.50	0.80	3.30	2.80	2.80
<b>Density</b> (spring electrofishing)										
PSD (quality)	71.0	-	82.0	-	93.0	-	81.0	-	75.0	-
RSD (preferred)	22.0	-	36.0	-	30.0	-	50.0	-	39.0	-
CPUE (total)	74.6	-	106.3	-	119.0	-	78.8	-	66.3	-
CPUE $\geq$ Stock	73.3	-	97.0	-	108.0	-	70.3	-	48.7	-
CPUE $\geq$ MLL (15-inches)	15.3	-	-	-	32.3	-	35.3	-	15.4	-
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	91.2	-	98.5	-	91.2	-	94.6	-	91.7	-
Quality	86.7	-	95.0	-	89.6	-	94.9	-	85.4	-
Preferred	88.0	-	93.1	-	85.9	-	93.9	-	88.3	-
Memorable	92.6	-	93.5	-	-	-	94.0	-	112.7	-
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	-	-	-	-	-	0.81	-	-	-	-
Catch Rate, num./hr (any black bass)	-	-	-	-	-	0.89	0.94	-	-	-
Harvest Rate, num./hr (any black bass)	-	-	-	-	-	0.07	0.02	-	-	-
% Released	-	-	-	-	-	90.4%	97.1%	-	-	-
Mean Weight	-	-	-	-	-	2.63	2.95	-	-	-

**Smallmouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.30	-	0.80
<b>Density</b> (spring electrofishing)										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	0.3	-	-	-
CPUE $\geq$ Stock	-	-	-	-	-	-	-	-	-	-
CPUE $\geq$ Preferred	-	-	-	-	-	-	-	-	-	-
CPUE $\geq$ MLL (18-inches)	-	-	-	-	-	-	-	-	-	-
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	-	-	-	-	-	0.13	-	-	-	-
Catch Rate, num./hr (any black ba	-	-	-	-	-	0.89	0.94	-	-	-
Harvest Rate, num./hr (any black l	-	-	-	-	-	0.07	0.02	-	-	-
% Released	-	-	-	-	-	98.0%	96.0%	-	-	-
Mean Weight	-	-	-	-	-	4.68	3.94	-	-	-



**Spotted Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	0.00	-	0.30	-	-	-	-	-	-	-
CPUE (mid-summer seine)	9.50	3.80	1.50	0.00	3.30	2.30	2.50	6.50	-	3.80
<b>Density</b> (spring electrofishing)										
PSD	40	-	50	-	-	-	-	-	-	-
RSD (preferred)	60	-	9	-	-	-	-	-	-	-
CPUE (total)	14.5	-	7.7	-	4.0	-	1.0	-	-	-
CPUE $\geq$ Stock	5.0	-	7.4	-	-	-	-	-	-	-
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	90.3	-	94.1	-	-	-	-	-	-	-
Quality	85.4	-	89.1	-	-	-	-	-	-	-
Preferred	-	-	76.7	-	-	-	-	-	-	-
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	-	-	-	-	-	0.21	-	-	-	-
Catch Rate, num./hr (any black bass)	-	-	-	-	-	0.89	0.94	-	-	-
Harvest Rate, num./hr (any black bass)	-	-	-	-	-	0.07	0.02	-	-	-
% Released	-	-	-	-	-	96.9%	99.2%	-	-	-
Mean Weight	-	-	-	-	-	2.05	1.57	-	-	-

**Black Crappie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (fall trapnetting)										
Substock CPUE	-	-	-	-	-	-	-	-	1.60	-
<b>Density</b> (electrofishing)										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	0.5	-	-	-
CPUE $\geq$ Stock	-	-	-	-	-	-	-	-	-	-
CPUE $\geq$ MLL (10-inches)	-	-	-	-	-	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	-	-	-	-	-	11,300	4,054	-	-	-
Angler Hours/Acre	-	-	-	-	-	1.09	0.39	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	-	-	-	-	-	2.08	4.21	-	-	-
Harvest Rate (any crappie)	-	-	-	-	-	0.73	1.12	-	-	-
% Released (black crappie)	-	-	-	-	-	63.0%	71.4%	-	-	-
Mean Weight (black crappie)	-	-	-	-	-	0.83	0.80	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	-	-	-	-	-	\$106,910	\$12,740	-	-	-

**White Crappie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (fall trapnetting)										
Substock CPUE	-	-	-	-	-	-	-	-	1.53	-
<b>Density</b> (electrofishing)										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	0.5	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (10-inches)	-	-	-	-	-	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	-	-	-	-	-	11,300	4,054	-	-	-
Angler Hours/Acre	-	-	-	-	-	1.09	0.39	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	-	-	-	-	-	2.08	4.21	-	-	-
Harvest Rate (any crappie)	-	-	-	-	-	0.73	1.12	-	-	-
% Released (black crappie)	-	-	-	-	-	89.9%	78.6%	-	-	-
Mean Weight (black crappie)	-	-	-	-	-	0.92	0.79	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	-	-	-	-	-	\$106,910	\$12,740	-	-	-

**Striped Bass\***

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Substock CPUE	-	-	-	-	-	-	-	-	-	-
<b>Density</b> (gill netting)										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-
CPUE > Stock	-	-	-	-	-	-	-	-	-	-
CPUE ≥ 15-inches	-	-	-	-	-	-	-	-	-	-
<b>Growth</b> (gill netting)										
Length Age-2	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (gill netting)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (gill netting)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours	-	-	-	-	-	-	75	-	-	-
Angler Hours/Acre	-	-	-	-	-	-	0.01	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	-	-	-	0.00	-	-	-
Harvest Rate (intended)	-	-	-	-	-	-	0.00	-	-	-
% Released	-	-	-	-	-	-	98.3%	-	-	-
Mean Weight	-	-	-	-	-	-	16.70	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Striped Bass	-	-	-	-	-	-	-	-	-	-

**Bluegill**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (electrofishing)	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	59.50	2.50	28.00	25.30	12.80	12.00	7.50	10.80	1.30	7.80
Substock CPUE (fall trapnetting)									22.75	
<b>Density (electrofishing)</b>										
PSD	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-
<b>Growth (electrofishing)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (electrofishing)</b>										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	-	-	-	-	-	-
Preferred	-	-	-	-	-	-	-	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality (electrofishing)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure (creel)</b>										
Angler Hours (all sunfish)	-	-	-	-	-	1,141	827	-	-	-
Angler Hours/Acre	-	-	-	-	-	0.11	0.08	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate (any sunfish)	-	-	-	-	-	5.00	2.18	-	-	-
Harvest Rate (any sunfish)	-	-	-	-	-	0.00	1.54	-	-	-
% Released (bluegill)	-	-	-	-	-	71.1%	53.6%	-	-	-
Mean Weight (bluegill)	-	-	-	-	-	0.28	0.34	-	-	-
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Sunfish	-	-	-	-	-	\$13,290	\$820	-	-	-

**Redear**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (electrofishing)	-	-	-	-	0.00	-	1.00	-	-	-
CPUE (mid-summer seine)	0.00	0.00	6.30	2.30	0.30	0.00	0.00	4.00	0.30	0.50
Substock CPUE (fall trapnetting)									134.5	
<b>Density (electrofishing)</b>										
PSD	-	-	-	-	72	-	29.0	-	87.0	-
RSD (preferred)	-	-	-	-	24.0	-	1.0	-	21.0	-
CPUE (total)	-	-	-	-	70.7	-	22.0	-	42.7	-
CPUE > Stock	-	-	-	-	70.7	-	21.0	-	17.8	-
<b>Growth (electrofishing)</b>										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition (spring electrofishing)</b>										
Stock	-	-	-	-	91.8	-	-	-	103.0	-
Quality	-	-	-	-	94.4	-	-	-	105.7	-
Preferred	-	-	-	-	99.6	-	-	-	101.8	-
Memorable	-	-	-	-	-	-	-	-	104.8	-
<b>Mortality (electrofishing)</b>										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure (creel)</b>										
Angler Hours (all sunfish)	-	-	-	-	-	1,141	827	-	-	-
Angler Hours/Acre	-	-	-	-	-	0.11	0.08	-	-	-
<b>Fishing Success (creel)</b>										
Catch Rate (any sunfish)	-	-	-	-	-	5.00	2.18	-	-	-
Harvest Rate (any sunfish)	-	-	-	-	-	0.00	1.54	-	-	-
% Released (redeer)	-	-	-	-	-	46.3%	45.4%	-	-	-
Mean Weight (redeer)	-	-	-	-	-	0.47	0.39	-	-	-
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Sunfish	-	-	-	-	-	\$13,290	\$820	-	-	-

**Catfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all catfish)	-	-	-	-	-	26,946	28,096	-	-	-
Angler Hours/Acre	-	-	-	-	-	2.60	2.71	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (any catfish)	-	-	-	-	-	1.09	1.40	-	-	-
Harvest Rate (any catfish)	-	-	-	-	-	0.59	0.65	-	-	-
% Released (channel)	-	-	-	-	-	61.5%	61.6%	-	-	-
Mean Weight (channel)	-	-	-	-	-	2.43	2.93	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Catfish	-	-	-	-	-	\$248,560	\$74,190	-	-	-

**Shad**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (Spring Electrofishing)										
Alewife CPUE	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	-	8.3	-	-	-	-	-	-	-
Threadfin CPUE	-	-	-	-	-	-	-	-	-	-
Threadfin CPUE (fall trapnetting)									23.90	

**Habitat Enhancement - 2015**

Type of Work	Details	Quantity	
		New	Renovated
None performed			

**Water Quality Monitoring - 2015**

Parameter	Sampling Period	Water Quality
Temperature		
Dissolved Oxygen		
PH		
Conductivity		

### Parksville Reservoir (2015 Annual Report)

#### Description

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**Area (acres):** 1,930

**Mean Depth (feet):**

**Shoreline (miles):** 47

**Counties:** Polk

#### Summary:

**Largemouth bass (LMB):** Spring electrofishing surveys were conducted on Parksville Reservoir in 2015 to evaluate black bass. These surveys are typically conducted every other year therefore the next electrofishing survey is scheduled for 2017.

Since the realization of Alabama bass in Parksville and the proliferation of this species, the LMB population has decreased according to spring electrofishing surveys. CPUE for substock LMB is currently low which is also consistent over the past years of sampling; 3.0 lmb/hour in the 2011 spring electrofishing surveys, 3.33 lmb/hour in the same 2013 surveys and 0.33 lmb/hour for 2015. Recent electrofishing surveys have shown that species composition in reference to black bass is heavily skewed towards Alabama bass with this species most recently representing over 60% of the black bass composition at Parksville Reservoir. Mid-summer seining surveys have not had a good representation of LMB unlike high numbers of Alabama bass found in the same surveys. Overall CPUE of 33 lmb/hour in the 2013 electrofishing surveys did show a rebound from low numbers captured within the previous two surveys but the 2015 results were at an overall low at 11.7 lmb/hour. The CPUE for LMB  $\geq 15"$  was also at a record low at 1.7 lmb/hour. These CPUEs per spring electrofishing surveys do not reflect well currently for the LMB population that is no doubt being negatively impacted by the dominant presence of Alabama bass. The condition of LMB collected was consistent with past years indicating stable forage bases for now. Historically, Parksville has been characterized by being very nutrient poor, high contaminant levels (mainly copper) and hosting a very limited forage base.

**Smallmouth bass (SMB):** No representative samples of smallmouth bass have been collected in our data surveys on Parksville Reservoir. Limited reports from a few fishermen say they catch smallmouth bass on a rare occasion. There are very low if any expectations for catches of smallmouth bass in Parksville Reservoir.

**Alabama Bass:** In 2001, a small representation of "spotted bass" (2 fish) were observed during the bi-annual spring electrofishing surveys on Parksville Reservoir. Since that time, it has been discovered that these are Alabama bass according to genetic tests rather than the native northern strain "Kentucky" spotted bass historically found in TN reservoirs. Other genetic tests performed on "spotted bass" from Parksville confirm that they are all 100% Alabama bass. To date, these Alabama bass have been very prolific within the waters of Parksville. For example, overall CPUE from our electrofishing surveys have increased from a rate of 4.0 Alabama bass/hr in 2003 to a rate of 48.7 Alabama bass/hr in 2013 and 35.3 Alabama bass/hr in 2015. According to the mid-summer seining surveys conducted in 2011, the catch rates were at 11 Alabama bass/seine haul and in 2014 this same survey yielded 10 Alabama bass/seine haul, much higher than the numbers for LMB from these same surveys. These seining sample numbers are very reflective of positive spawning results for Alabama bass in Parksville. The temporary "spotted bass" state record for TN weighing 5 lb. 14 Oz in 2008 was caught in Parksville Reservoir. This fish was confirmed by genetic tests to be an Alabama bass. Since this record two new record Alabama bass have been caught in TN waters in or adjoining Parksville Reservoir. The first below Parksville Dam (Ocoee River, tributary to Chickamauga Reservoir) in 2010 weighing 6 lbs. 07 oz. Currently the Alabama bass



record for TN is once again from within Parksville Reservoir weighing 7 pounds even caught on March 10, 2014. The identity of this record fish was confirmed by genetic tests. Alabama bass continue to expand within this reservoir and beyond. Historically, this reservoir's limiting factors for largemouth bass were low forage bases, poor water quality and low presence of habitat. Currently, aquatic vegetation is present on the upper and lower ends of the reservoir. Additionally, blue back herring have been documented in the reservoir by the U.S. Forest Service and also by shad netting efforts conducted by the Region 3 Reservoir Crew in 2014. So not only are Alabama bass expanding but apparently so are other contributing factors to propel this population of non-native fish to expand and dominate with the small area of Parksville Reservoir (~1,900 surface acres). Condition factors (Wrs) for Alabama bass collected during the spring electrofishing surveys were comparable to that of the LMB from the same survey. The population of Alabama bass in Parksville are expected to remain stable and continue to negatively impact the native LMB population.

**Crappie:** Parksville Reservoir does not rival other reservoirs in close proximity geographically in regards to crappie fishing success. Because of the clearness of this reservoir, it is better suited for black crappie rather than white crappie. Fishing for crappie on Parksville Reservoir will provide mixed success according to electrofishing and recent creel surveys. No consistency with high catch rates is expected. Black and blacknose crappie have been stocked in Parksville annually starting in 2013 with hopes of boosting the crappie fishing there and possibly creating a hatchery brood source for blacknose crappie. Future evaluations will reveal the success of this project or the lack of. According to the roving creel survey in 2013 anglers caught crappie at a rate of 1.30 crappie/hour.

**Redear:** Redear sunfish have been stocked collectively with bluegill in Parksville Reservoir. Redear sunfish were first stocked into Parksville in the year 2007 in hopes of supplying a forage base while also offering increased angling opportunities. Most recently 56,000 redear fingerlings were stocked into Parksville Reservoir in 2015. Time will tell how prolific they are in this reservoir. Limited fishing success is expected at the current time although some reports of nice sized redear caught by panfish anglers have been received. The 2013 creel report showed little effort and success in regards to overall panfishing in Parksville.

**Bluegill:** Bluegill have a good presence in Parksville Reservoir. Additionally, they were stocked in 2007 in conjunction with redear sunfish to help promote and sustain a forage base for gamefish there. Bluegill were also stocked in 2008 and 2011. According to limited fishing reports, anglers enjoy good success of bluegill angling there during peak opportunistic times. Fair success should be expected at the current time. Sunfish (bluegill, redear) were caught at a rate of 2 fish/hour according to creel surveys which were conducted at Parksville in 2013. Bluegill abundance remains consistent in the mid-summer seining surveys which should be a reflection of positive annual spawning success.

**Shad:** Shad populations in Parksville Reservoir are limited at best. During the bi-annual spring electrofishing surveys, some large adult gizzard shad were observed. However, rarely if ever do we observe schools of young shad that would offer promise of a sustainable forage base. A large die-off of blueback herring during the winter was observed by the public and the U.S. Forest Service a few years ago. It is thought that these blue back have been illegally introduced as bait or intentions of providing forage for the illegally introduced Alabama bass. In April of 2014, a total of 5 gill nets were set in Parksville in search of blueback herring. Five blueback herring were caught in these surveys, confirming from earlier reports their presence in Parksville Reservoir.

**Lakewide Creel Results**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	-	-	-	-	-	-	-	44,156	-	-
Angler Hours Per Acre	-	-	-	-	-	-	-	23.36	-	-
Angler Trips	-	-	-	-	-	-	-	7,029	-	-
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	-	-	-	-	-	-	-	\$99,940	-	-

**Black Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	-	-	-	-	-	-	-	-	-	-
(hrs/acre)	-	-	-	-	-	-	-	-	-	-
Any Black Bass (hrs)	-	-	-	-	-	-	-	36,771	-	-
(hrs/acre)	-	-	-	-	-	-	-	19.45	-	-
Largemouth Bass (hrs)	-	-	-	-	-	-	-	-	-	-
(hrs/acre)	-	-	-	-	-	-	-	-	-	-
Smallmouth Bass (hrs)	-	-	-	-	-	-	-	-	-	-
(hrs/acre)	-	-	-	-	-	-	-	-	-	-
Alabama Bass (hrs)	-	-	-	-	-	-	-	-	-	-
(hrs/acre)	-	-	-	-	-	-	-	-	-	-
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	-	-	-	-	-	-	-	-	-	-
Any Black Bass	-	-	-	-	-	-	-	\$87,520	-	-
Largemouth Bass	-	-	-	-	-	-	-	-	-	-
Smallmouth Bass	-	-	-	-	-	-	-	-	-	-
Alabama Bass	-	-	-	-	-	-	-	-	-	-

**Largemouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	-	7.00	-	0.66	-	3.00	-	3.33	-	0.33
CPUE (mid-summer seine)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	4.50	0.00	0.00
<b>Density</b> (spring electrofishing)										
PSD	-	-	-	47	-	77	-	62.5	-	82.3
RSD (preferred)	-	8.0	-	22.0	-	45.0	-	26.0	-	24.0
CPUE (total)	-	21.0	-	17.3	-	18.7	-	33.0	-	11.7
CPUE $\geq$ Stock	-	21.0	-	16.7	-	15.7	-	29.3	-	6.1
CPUE $\geq$ MLL (15-inches)	-	9.7	-	7.3	-	7.0	-	7.7	-	1.7
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	-	83.2	-	89.7	-	91.4	-	86.5	-	89.7
Quality	-	84.5	-	81.5	-	85.8	-	84.5	-	85.2
Preferred	-	83.3	-	81.2	-	83.0	-	89.0	-	86.9
Memorable	-	81.5	-	83.4	-	91.0	-	80.9	-	87.5
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	-	-	-	-	-	-	-	-	-	-
Catch Rate, num.hr (any black bass)	-	-	-	-	-	-	-	1.09	-	-
Harvest Rate, num./hr (intended)	-	-	-	-	-	-	-	0.19*	-	-
% Released	-	-	-	-	-	-	-	85.2%	-	-
Mean Weight	-	-	-	-	-	-	-	2.36	-	-

\* Any black bass

**Alabama Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	-	7.00	-	5.00	-	6.67	-	3.00	-	1.00
CPUE (mid-summer seine)	0.00	0.00	0.00	1.50	0.00	11.00	2.00	3.00	10.00	4.00
<b>Density</b> (spring electrofishing)										
PSD	-	-	-	55	-	49	-	62.8	-	71.8
RSD (preferred)	-	8	-	16	-	12	-	38	-	36
CPUE (total)	-	21.3	-	38.3	-	39.3	-	48.7	-	35.3
CPUE $\geq$ Stock	-	21.3	-	33.3	-	32.7	-	45.7	-	17.9
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	-	83.2	-	79.9	-	79.5	-	84.7	-	86.1
Quality	-	85.8	-	80.7	-	81.2	-	86.9	-	87.7
Preferred	-	80.5	-	80.3	-	78.1	-	91.2	-	85.0
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	-	-	-	-	-	-	-	-	-	-
Catch Rate, num.hr (any black bass)	-	-	-	-	-	-	-	1.09	-	-
Harvest Rate, num./hr (any black bass)	-	-	-	-	-	-	-	0.19	-	-
% Released	-	-	-	-	-	-	-	85.8%	-	-
Mean Weight	-	-	-	-	-	-	-	1.35	-	-

**Black Crappie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE										
CPUE (midsummer seine)									2.0	
<b>Density</b> (electrofishing)										
PSD										
RSD (preferred)										
CPUE (total)						3.3				
CPUE ≥ Stock										
CPUE ≥ MLL (10-inches)										
<b>Growth</b> (electrofishing)										
Length Age-1										
Length Age-3										
<b>Condition</b> (electrofishing)										
Stock										
Quality										
Preferred										
Memorable										
<b>Mortality</b> (electrofishing)										
Total Mortality										
<b>Stocking</b>										
# Black & BNC mix	-	-	-	-	-	-	-	23,152	70,990	38,440
#/Acre	-	-	-	-	-	-	-	12.25	37.56	20.30
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	-	-	-	-	-	-	-	1,486	-	-
Angler Hours/Acre	-	-	-	-	-	-	-	0.79	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	-	-	-	-	-	-	-	1.30	-	-
Harvest Rate (any crappie)	-	-	-	-	-	-	-	0.67	-	-
% Released (black crappie)	-	-	-	-	-	-	-	58.1%	-	-
Mean Weight (black crappie)	-	-	-	-	-	-	-	0.80	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	-	-	-	-	-	-	-	\$3,560	-	-

Non-target sample unless otherwise noted.

**Bluegill**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (electrofishing)						0.33				
CPUE (mid-summer seine)	13.00	9.00	5.00	4.50	5.00	11.00	14.50	7.00	6.50	2.00
<b>Density</b> (electrofishing)										
PSD						56				-
RSD (preferred)						6				-
CPUE (total)						33.3				-
CPUE $\geq$ Stock						33.0				-
CPUE $\geq$ Preferred						2.0				-
<b>Growth</b> (electrofishing)										
Length Age-1										-
Length Age-3										-
<b>Condition</b> (electrofishing)										
Stock										-
Quality										-
Preferred										-
Memorable										-
<b>Mortality</b> (electrofishing)										
Total Mortality										-
<b>Stocking</b>										
#	-	127,477	248,966	-	-	102,352	-	-	-	-
#/Acre	-	67.45	131.73	-	-	54.44	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all sunfish)	-	-	-	-	-	-	-	90	-	-
Angler Hours/Acre	-	-	-	-	-	-	-	0.05	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (any sunfish)	-	-	-	-	-	-	-	2.00	-	-
Harvest Rate (any sunfish)	-	-	-	-	-	-	-	0.00	-	-
% Released (bluegill)	-	-	-	-	-	-	-	75.7%	-	-
Mean Weight (bluegill)	-	-	-	-	-	-	-	0.26	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Sunfish	-	-	-	-	-	-	-	\$0	-	-

Non-target sample unless otherwise noted.

**Redear**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (electrofishing)										-
CPUE (mid-summer seine)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
<b>Density (electrofishing)</b>										
PSD										-
RSD (preferred)										-
CPUE (total)										-
CPUE ≥ Stock										-
CPUE ≥ MLL (10-inches)										-
<b>Growth (electrofishing)</b>										
Length Age-1										-
Length Age-3										-
<b>Condition (electrofishing)</b>										
Stock										-
Quality										-
Preferred										-
Memorable										-
<b>Mortality (electrofishing)</b>										
Total Mortality										-
<b>Stocking (bluegill/redear mix)</b>										
#	-	177,276	-	336,396	-	-	-	-	-	56,000
#/Acre	-	93.80	-	177.99	-	-	-	-	-	29.62
<b>Angling Pressure (creel)</b>										
Angler Hours (all sunfish)	-	-	-	-	-	-	-	90	-	-
Angler Hours/Acre	-	-	-	-	-	-	-	0.05	-	-
<b>Fishing Success (creel)</b>										
Catch Rate (any sunfish)	-	-	-	-	-	-	-	2.00	-	-
Harvest Rate (any sunfish)	-	-	-	-	-	-	-	0.00	-	-
% Released (redear)	-	-	-	-	-	-	-	40.2%	-	-
Mean Weight (redear)	-	-	-	-	-	-	-	0.38	-	-
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Sunfish	-	-	-	-	-	-	-	\$0	-	-

Non-target sample unless otherwise noted.

**Shad**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (Electrofishing)										
Alewife CPUE										-
Gizzard CPUE										-
Threadfin CPUE										-
Blueback CPUE									0.25*	-

\*note: 5 nets were sets 4/23/14 to detect the presence of blueback herring. One net was tampered with, and 5 fish were collected in the other four over a 17 hour set.

**Habitat Enhancement - 2015**

Type of Work	Details	Quantity	
		New	Renovated
None performed			

**Water Quality Monitoring - 2015**

Parameter	Sampling Period	Water Quality
Temperature	none performed	
Dissolved Oxygen		
PH		
Conductivity		



### Watts Bar Reservoir (2015 Annual Report)

#### Description

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**Area (acres):** 39,600

**Mean Depth (feet):**

**Shoreline (miles):** 722

**Counties:** Rhea, Meigs, Roane, and Loudon

**Total Fishing Effort (angler hours):** 657,860

**Total Value by Anglers:** \$3,879,130

#### Summary:

**Largemouth bass (LMB):** Largemouth bass fishing at Watts Bar Reservoir continues to be good overall. The electrofishing surveys conducted in the spring of 2014 show good year class strengths of LMB collected. Spring black bass electrofishing surveys are conducted every other year on Watts Bar thus the next survey is scheduled for 2016, the last being done in 2014. In those 2014 electrofishing surveys, overall CPUE of 35.8 lmb/hour was slightly lower than the 2012 survey, in which 32.4 lmb/hour were collected. According to an annual roving creel survey on Watts Bar Reservoir conducted in 2015, catch rates for anglers pursuing LMB were 0.50 lmb/hour. Mean weights of caught LMB remain very consistent over the past ten years with 2.85 lbs. being the mean weight of LMB harvested by anglers in 2015. The mid-summer seining surveys revealed an elevated catch rate (8.80 lmb/seine haul) when compared to last year's CPUE of 4.50 lmb/seine haul. These seine haul surveys hopefully show consistent spawning with the most recent surveys. The catch rates for substock LMB have been stable and at favorable levels over the past ten years. The absence or minimal presence of aquatic vegetation continues to be a limiting factor as it applies to available habitat in Watts Bar Reservoir. In the late 1980's Eurasian milfoil had a strong presence in this reservoir and correlated higher densities of largemouth bass. Prolific forage bases of shad species (gizzard and threadfin) here have promoted good populations of black bass as well as other gamefish. Hopefully, favorable spawning conditions will be realized on a consistent basis allowing for continued sustainable populations of largemouth bass.

In 2015 a Florida largemouth bass (FLMB) stocking program was launched in Watts Bar Reservoir. There were three main stocking sites (Piney embayment @ Rhea Springs, Big Springs in Meigs Co, and Caney Creek). Because Watts Bar has minimal amounts of habitat conducive to juvenile fish survival, these sites were enhanced with rows of brush to promote hiding places for the juvenile fish once released. Annual stockings of FLMB will be repeated for the next several years. These sites are located in the mid to lower end of the reservoir and incorporate a multitude of different habitat types for adult and sub-adult bass. Ongoing data surveys (i.e. electrofishing, genetics, and creel) will be conducted during this process to evaluate the success of this project. There were a total of 137,439 FLMB fingerlings stocked into Watts Bar in 2015 between the 3 sites mentioned.

**Smallmouth bass (SMB):** Smallmouth bass have been surveyed with semi-annual spring electro-fishing surveys and also in targeted night surveys. The smallmouth bass fishery in Watts Bar Reservoir is held in high regards by the fishing public. Since the onset of the 18" minimum size limit, 5 bass/day on smallmouth bass at Watts Bar, the population has responded well with observed increases in abundance of SMB up to the 18" minimum length limit (MLL). High fishing pressure and associated mortality are most likely responsible for the cropping off of SMB greater than 18" as is evident in length frequency graphs from electrofishing data collections. Originally, TWRA recommended a one or two fish limit at an 18" MLL but due to public opposition from the tournament angling community, it was raised to five by the TFWC.

The targeted samples are usually conducted in early April at night and on rocky banks in the main TN River area on the lower end and mid-section (White's Creek) areas of Watts Bar Reservoir. The overall catch rate for the targeted samples conducted in 2015 was 21.3 smb/hour, the lowest recorded in the past ten years. In this same 2015 survey, catch rates (0.6 smb/hour) for SMB greater than 18" in both electrofishing surveys remain low although some of this may be attributed to limitations of electrofishing gear. The highest of these catch rates was 3.6 smb/hour observed in a targeted sample in 2009 although the catch rate for 2011 was close at 3.2 smb/hour. Condition factors for SMB in the quality to memorable size range were satisfactory although lower than 3 previously like surveys in past years. Watts Bar has an abundant forage base of shad (gizzard and threadfin) that consistently lend to good condition factors for black bass at Watts Bar as well as other gamefish.

**Spotted bass (SPB):** According to the spring electro-fishing surveys conducted over the past ten years at Watts Bar Reservoir, CPUE (fish/hour) for spotted bass have decreased to being non-existent in the spring 2014 black bass electrofishing surveys. Other reservoirs in Region 3 along the TN River are experiencing this same trend with spotted bass according to creel and electrofishing surveys. One possible explanation for this decline could be from a change in water levels due to TVA's Reservoir Operations Study (ROS), instituted in 2008, plan which delays the summertime fill to May 15 instead of the traditional April 15. This ROS plan has potentially compromised spawning success and preferred nesting sites for spotted bass. Of the SPB that have been collected in the past, relative weights (Wrs) are satisfactory. Spotted bass in Watts Bar Reservoir have a tendency to be less numerous and smaller in size than some other region 3 reservoirs like Center Hill and neighboring Chickamauga Reservoir. For these reasons, it is not anticipated that Watts Bar Reservoir will be a high destination for targeted SPB fishing and a special watch should be extended towards monitoring this native fishery in Watts Bar and other mainstem reservoirs along the TN River. A small representation of SPB did show up in our mid-summer seining surveys at a CPUE of 0.20 spb/seine haul.

**NOTE:** In 2014 there were some suspicious looking "spotted bass" collected at the White's Creek embayment while conducting spring black bass electrofishing surveys at Watts Bar. These suspect fish were sent off for genetic analysis for species identification. Fears were confirmed when the small sample (10 fish) were confirmed as possessing different levels of Alabama bass genes. These Alabama bass were likely transported to Watts Bar by fishermen trying to enhance the bass fishery there, which has long been rumored to be the case. The bad news is that Alabama bass have been well documented to cause declines in native largemouth bass and especially smallmouth bass were Alabama bass have been introduced (i.e. Upper Georgia reservoirs). Careful monitoring of the Alabama bass distribution and abundance will be imperative at Watts Bar although little can be done at this time or perhaps in the future. Awareness of stocking illegal fish and specifically Alabama bass has been highlighted in the TWRA annual fishing regulation publications. Alabama bass were first observed in Tennessee at Parksville Reservoir in 2001.

**Crappie:** Watts Bar provides a good crappie fishery with opportunities for both white and black crappie. Recent creel surveys show that crappie harvests from Watts Bar are nearly even amongst black crappie and white crappie. Traditionally, especially in the 1980's, white crappie have been the dominant species of crappie caught due to the large year classes produced at Watts Bar. As with some other reservoirs, in Tennessee and out of state, white crappie population numbers have decreased and black crappie have increased, especially in reservoirs where the water clarity has improved which has proven to be more conducive to black crappie. According to the fall trapnetting surveys conducted in 2010, white crappie had great spawning success that year. Not since 2003 has a year class this large been realized. Large spring rain events were likely the cause for great year classes in 2003 and 2010. Fall trapnetting surveys conducted on Watts Bar in 2014 and 2015 revealed fair catch rates for white crappie at 2.40 and 2.69

white crappie/net night respectively. However, the year 2010 exhibited 12.4 white crappie/net night. In contrast, black crappie representation in the 2014 and 2015 fall trapnetting surveys were non-existent and this is an ongoing trend over the past ten years. Blacknose crappies (BNC) have been stocked in middle (White's Creek) and lower (Piney Creek) embayments in hopes of offsetting poor years of black crappie recruitment in Watts Bar since 2010 with the exception of 2013. An additional motive for stocking these BNC has been to produce adult BNC which can be used for brood fish within the hatchery system at Sugar Creek and Hiwassee fish ponds which are in close proximity to Watts Bar Reservoir. Several brood blacknose crappie have been collected from Watts Bar over the past couple of years. The year 2013 was a productive year for crappie anglers on Watts Bar Reservoir due to the elevated spawning success in 2010. This 2010 year class continues to be represented in the creel harvest. Anglers fishing for crappie in Watts Bar expended an estimated \$216,580 in 2015 according to roving creel surveys. Additionally, creel surveys show that catch rates for crappie at Watts Bar have remained fairly stable over the past ten years.

**Redear:** When compared to other redear sunfish fisheries in other Tennessee reservoirs, Watts Bar is not a high destination for anglers seeking redear angling opportunities. According to roving creel surveys, low average catch rates have been realized over the past ten years. Also, redear sunfish have made a minimal presence in the mid-summer seining surveys. Redear sunfish will be caught by anglers in pursuit of bluegill and those who fish some of the few historic redear nesting sites. The average weight for a harvested redear from Watts Bar in 2015 was 0.35 lb. Anglers specifically looking to catch redear will probably engage in a trip to neighboring Chickamauga Reservoir or beyond at Nickajack Reservoir.

**Bluegill:** Good bluegill populations, more in abundance than quality size, provide ample opportunity for angling on Watts Bar Reservoir. Overall the mid-summer seining surveys reflect consistent spawning success for bluegill here although samples taken in 2014 were at a ten year low (2.70 bluegill/seine haul) but rebounded in 2015 to a CPUE of 16.1 bluegill/seine haul. Bluegill were also well represented in the fall trapnetting surveys at a CPUE of 6.7 bluegill/net night. Expectations for sustained bluegill populations are easily predicted for Watts Bar Reservoir. Bluegill are prolific, often realizing 3 spawns in one year, especially in environments like Watts Bar Reservoir and other neighboring TN River impoundments, there are no current regulations pertaining to size or creel here and at other reservoirs across the state for that matter. Bluegill will continue to be monitored through trapnets, mid-summer seines, creel, and electrofishing surveys.

**Sauger:** Due to inconsistent and unpredictable sauger spawning success, in the past annual stockings of sauger were recommended to ensure dependable annual year classes of fish. However, it was determined that the close relative of the sauger, walleye, be stocked in Watts Bar instead of sauger in 2011. Due to the difficulty with culturing sauger and the benefits that would be realized by instead stocking walleye; a walleye stocking program was initiated (see "Walleye" section in this Watts Bar report). In 2014, sauger anglers expended an estimated \$15,540 in pursuit of sauger according to our annual creel surveys and in 2015 there was not enough creel info gathered from sauger anglers to estimate this same figure. Most of the historic sauger fishing takes place in the area of Browder shoals upstream to Ft. Loudon Dam. Sauger, which are native to the TN River are expected to still be represented at some level but much lower than when sauger stocking occurred on an annual basis.

**Walleye:** A walleye stocking program was implemented at Watts Bar Reservoir in 2011 and walleye fingerlings have been stocked annually in the following years. In 2014, a gillnet survey was conducted on the middle (White's Creek) and lower sections (Piney River) of Watts Bar where walleye had been stocked. There were 106 walleye collected during this effort representing different year classes and all exhibited excellent condition factors (Wrs). Several walleye were collected exceeding the 16" MLL per

statewide regulations. The biggest walleye collected from this 2014 sample was 24.1 inches and weighed 6.5 pounds. Walleye from this survey on average were 17.1 inches long at age 3 according to data obtained from otoliths. Anglers have been very supportive and excited regarding this new project which replaced historic sauger stocking regimes at Watts Bar. Reports of anglers catching walleye have been common. As anglers learn the preference areas of the reservoir in association with walleye there should be a reflection of increased catch rates in creel surveys. This population and project will continue to be evaluated to determine recruitment, growth, mortality and density. Determination of preferred spawning runs by the walleye, if they are established will be beneficial to this evaluation as well. There will be a continued request for the stocking of walleye in Watts Bar annually in different sections of the reservoir (Piney Creek embayment, White's Creek Embayment, Clinch/Emory River, and upper section below Ft. Loudon Dam). There were a total of 232,509 walleye fingerlings stocked into Watts Bar in 2015. Roving creel surveys conducted in 2015 showed that the average catch rate for walleye had jumped considerably from 0.05 walleye/hour in 2014 to 1.29 walleye/hour in 2015. The average weight for walleye that were harvested in 2015 was 1.61 lb. reflecting a harvest of walleye right at the legal size for harvest of 16 inches.

**Catfish:** Fishing for catfish utilizing a variety of methods (trotlines, rod & reel, jugs, noodling, etc.) remains popular on Watts Bar Reservoir. Ample numbers of blue, channel, and flathead catfish provide great angling opportunity here. An estimated \$234,620 was spent while pursuing catfish in 2015 according to the roving creel surveys. Catfish harvest from Watts Bar is represented as the majority being blue catfish and channel catfish as the second most harvested. It is predicted that catfish angling here will remain positive in the respects of pursuit and the success thereof as data shows great consistency with angling hours expended in pursuit of catfish at Watts Bar as this figure was 1.84 angler hours/acre in 2015 with an average catch rate for that same year of 2.07 catfish/hour.

**Striped bass:** Striped bass continues to be a very popular fishery on Watts Bar Reservoir. These fish are stocked annually at Watts Bar. Striped bass have flourished at Watts Bar due to ample dissolved oxygen, thermal refuges, and abundant forage bases (gizzard and threadfin shad, skipjack). Striped bass were first stocked into Watts Bar in 1964 and has been part of a long tradition ever since. It is estimated from the 2015 creel surveys that \$356,860 was expended this same year in the pursuit of striped bass. The tailwater area (below Ft. Loudon Dam) continues to be the area of the greatest angling success for striped bass. In 2015 the average weight of harvested striped bass was 17.04 pounds. Angling effort has remained consistent for anglers in pursuit of striped bass at Watts Bar.

### Angler Attitude Surveys

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. In an effort to accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year

2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions (see questionnaire in Appendix) in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, avg size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often times, minority user groups succeed in representing the sentiment of the angling public when actually it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

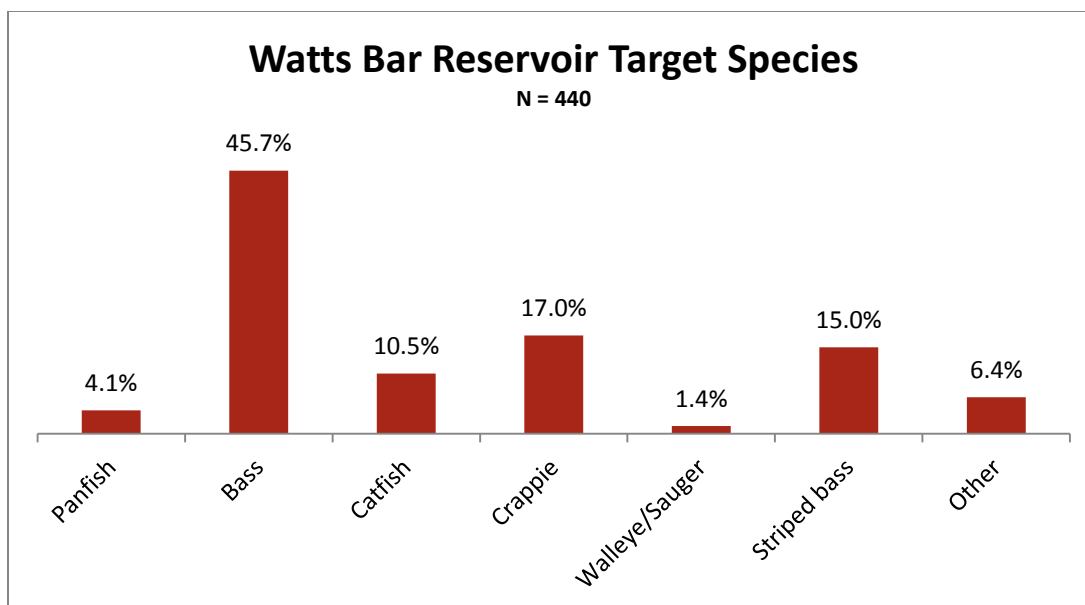
We sampled our angling public with attitude surveys again in 2015 on the four reservoirs in Region 3 that creel surveys were conducted (Center Hill, Chickamauga, Dale Hollow, and Watts Bar Reservoirs). Overall “approval” of Region 3 reservoirs in this 2015 survey is very favorable at the current time according to these 2015 surveys. We feel confident that this summary of our “angler attitudes” will once again provide insight to how these particular reservoirs are evaluated by our angling public. This type information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of our creel clerks (Danny Stone, Tim Poole) and the Region 3 reservoir fisheries crew.

Results from the Angler Attitude Survey conducted at Watts Bar in 2015 are as follows:

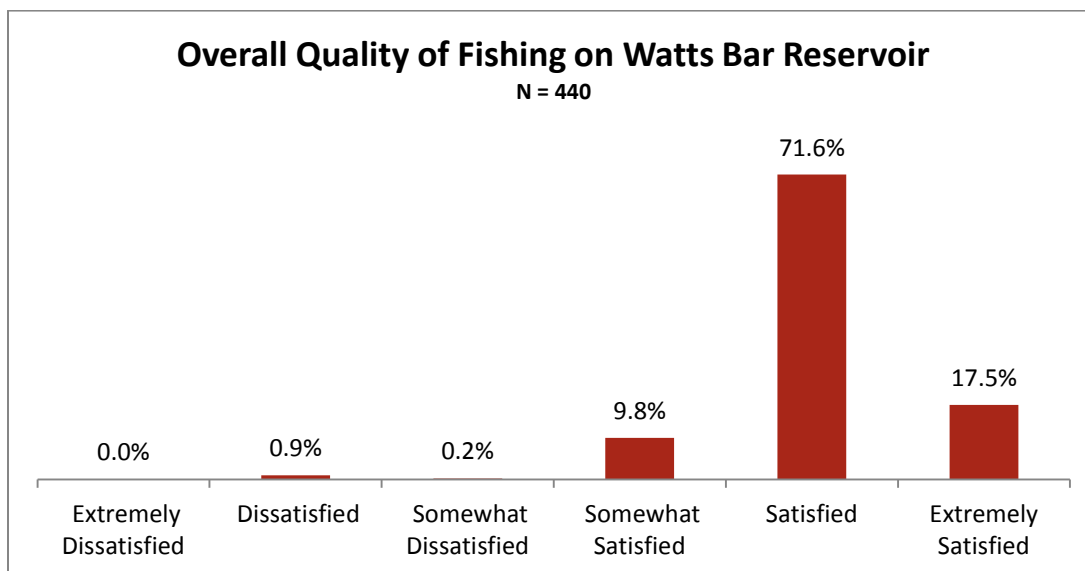
There were a total of 440 anglers who were fishing at Watts Bar Reservoir interviewed by a creel clerk for the angler attitude survey in 2015. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

The most targeted species of fish by anglers on Watts Bar was bass (45.7%) with crappie being a distant second at 17% (see graph below).



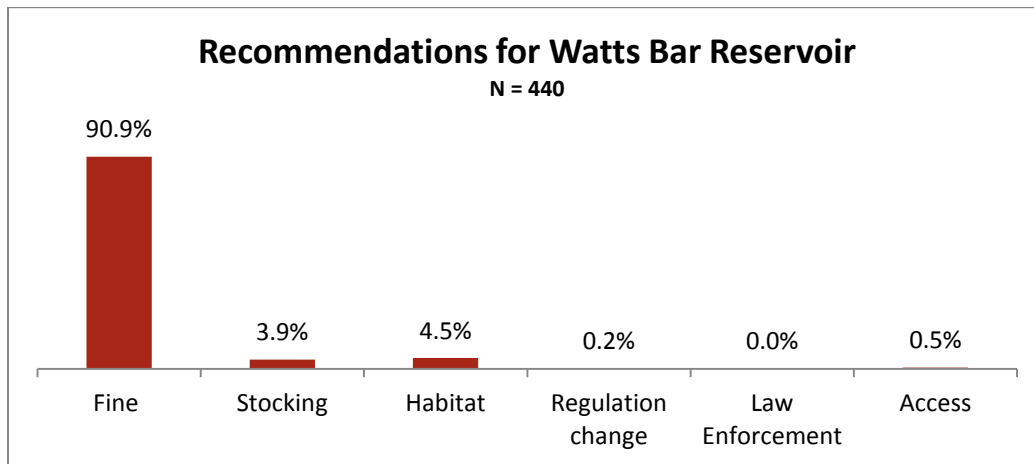
These surveys also revealed that fishermen who identified “Bass” (n=201) as their primary target species, 88.1% (177 bass anglers) also fished bass tournaments. On average, these bass tournament fishermen at Watts Bar Reservoir fished an average of 9.4 bass tournaments/year at Watts Bar Reservoir.

As the graph below depicts, anglers expressed a high satisfaction rating (98.9%) overall when asked about the “overall quality of fishing on Watts Bar Reservoir”.



According to the graph below, when anglers who fish Watts Bar Reservoir were asked if they had any recommendations the large majority (90.9%) had none thus indicating that everything was “fine” in their opinion. “Habitat” and more specifically the need for aquatic vegetation was the category with the most expression for change. TWRA has no control over the sustainability or management of aquatic vegetation at Watts Bar Reservoir or any other in Region 3. Of those who expressed “stocking” as the area of

concern, the majority placed emphasis on the stockings of crappie. Black and blacknose crappie have been stocked in Watts Bar on a limited basis throughout the past.



Overall, the angler attitudes obtained in 2015 from those fishing at Watts Bar Reservoir are ones that exhibit a high approval for the current fish management of this reservoir by TWRA.

**Lakewide Creel Results**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	509,367	442,133	514,776	437,960	471,088	466,016	472,307	383,910	329,671	657,864
Angler Hours Per Acre	13.03	11.31	13.17	11.2	12.05	11.92	12.08	9.82	8.43	16.8
Angler Trips	78,150	69,522	82,544	68,304	72,130	74,241	79,606	65,960	52,290	102,485
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	\$1,656,490	\$1,600,360	\$2,029,290	\$1,614,740	\$1,702,200	\$1,874,550	\$1,706,080	\$1,054,860	\$1,155,120	\$1,784,010

**Black Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	231,473	197,176	246,372	204,511	202,084	194,330	195,972	135,026	117,057	296,341
(hrs/acre)	5.85	4.98	6.22	5.16	5.10	4.91	5.01	3.45	2.99	7.58
Any Black Bass (hrs)	230,562	197,176	245,760	204,015	201,792	194,330	195,972	135,026	117,057	296,341
(hrs/acre)	5.82	4.98	6.21	5.15	5.10	4.91	5.01	3.45	2.99	7.58
Largemouth Bass (hrs)	911	-	251	496	292	-	-	-	1,212	-
(hrs/acre)	0.02	-	0.01	-	0.01	-	-	-	0.03	-
Smallmouth Bass (hrs)	-	-	361	-	-	-	-	-	-	-
(hrs/acre)	-	-	0.01	-	-	-	-	-	-	-
Spotted Bass (hrs)	-	-	-	-	-	-	-	-	-	-
(hrs/acre)	-	-	-	-	-	-	-	-	-	-
<b>Tournaments (all black bass)</b>										
# Tournaments (BITE)	-	35	-	-	-	-	-	-	-	-
Pounds/Angler Day (BITE)	-	2.8	-	-	-	-	-	-	-	-
Bass/Angler Day (BITE)	-	0.9	-	-	-	-	-	-	-	-
Tournament Angler Hrs/Acre (creel)	-	-	-	-	-	-	-	-	-	-
Tournament Catch Rate (creel)	0.50	0.34	0.99	1.68	1.31	0.71	1.02	1.05	1.34	0.69
Non-Tournament Catch Rate (creel)	1.00	0.84	0.93	0.95	0.68	0.68	0.76	0.82	0.52	0.95
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	\$1,435,970	\$1,447,500	\$2,093,030	\$1,908,330	\$1,538,330	\$1,465,590	\$923,890	\$1,003,780	\$842,750	\$777,010
Any Black Bass	\$827,200	\$865,210	\$2,088,570	\$1,902,810	\$1,535,960	\$1,465,590	\$923,890	\$1,003,780	\$842,750	\$777,010
Largemouth Bass	\$2,780	-	\$2,370	\$5,520	\$2,370	-	-	-	\$14,080	\$14,150
Smallmouth Bass	-	-	\$2,090	-	-	-	-	-	-	-
Spotted Bass	-	-	-	-	-	-	-	-	-	-



**Largemouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	4.20	-	12.60	-	8.40	-	3.00	-	2.29	
CPUE (mid-summer seine)	1.30	5.20	0.10	5.50	2.70	3.70	3.40	4.20	4.50	8.80
<b>Density</b> (spring electrofishing)										
PSD (quality)	77	-	69	-	70	-	76	-	72	-
RSD (preferred)	48.0	-	32.0	-	21.0	-	53.0	-	34.0	-
CPUE (total)	5.7	-	91.2	-	46.8	-	32.4	-	35.8	-
CPUE $\geq$ Stock	4.4	-	78.6	-	38.4	-	29.4	-	17.4	-
CPUE $\geq$ MLL (15-inches)	18.0	-	25.0	-	8.2	-	15.6	-	5.7	-
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	90.0	-	86.0	-	96.0	-	93.4	-	89.4	-
Quality	96.7	-	91.1	-	90.9	-	93.9	-	91.9	-
Preferred	98.3	-	93.7	-	90.1	-	96.4	-	95.7	-
Memorable	91.9	-	96.8	-	92.3	-	99.5	-	99.8	-
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	-	-	-	-						187233**
#/Acre	-	-	-	-						4.8
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	1.01	N/A	1.75	0.29	0.48	N/A	N/A	0.72	0.23	0.50
Catch Rate, num.hr (any black bass)	1.00	0.88	0.92	1.06	0.75	0.66	0.76	0.97	0.68	0.96
Harvest Rate, num./hr (intended)	0.1*	0.07*	0.06*	0.07*	0.04*	0.01*	0.07*	0.06*	0.00	0.00
% Released	88.9%	89.8%	94.1%	93.4%	92.4%	96.0%	92.4%	94.9%	91.2%	94.8%
Mean Weight	2.05	2.74	2.91	2.79	2.80	2.66	2.46	2.98	2.94	2.85

note: \* represents any black bass

\*\* represents Florida Largemouth Bass

**Smallmouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	0.20	-	1.20	-	1.20	-	0.20	-	-	-
CPUE (mid-summer seine)	0.60	0.30	1.00	0.70	1.40	0.10	0.50	0.30	1.80	0.40
<b>Density</b> (spring electrofishing)										
PSD	67	-	71	-	93	-	91	-	-	-
RSD (preferred)	47	-	29	-	57	-	55	-	-	-
CPUE (preferred)	-	-	-	-	1.0	-	-	-	-	-
CPUE (total)	6.2	-	2.6	-	4.0	-	2.4	-	-	-
CPUE $\geq$ Stock	6.0	-	1.4	-	2.8	-	2.2	-	-	-
CPUE $\geq$ Preferred	2.8	-	0.4	-	1.6	-	0.2	-	-	-
CPUE $\geq$ MLL (18-inches)	0.6	-	-	-	-	-	-	-	-	-
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	278.0	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	78.9	-	90.2	-	91.2	-	88.1	-	-	-
Quality	72.8	-	79.7	-	79.5	-	93.6	-	-	-
Preferred	89.2	-	-	-	78.8	-	83.4	-	-	-
Memorable	89.2	-	90.9	-	84.4	-	86.5	-	-	-
<b>Mortality</b> (spring electrofishing)										
Total Mortality	61.0%	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	N/A	N/A	0.00	N/A	N/A	N/A	N/A	0.21	0.11	N/A
Catch Rate, num.hr (any black bass)	1.00	0.88	0.92	1.06	0.75	0.66	0.76	0.97	0.68	0.96
Harvest Rate, num./hr (intended)	0.1*	0.07*	0.06*	0.07*	0.04*	0.01*	0.07*	0.06*	0.00	N/A
% Released	88.9%	89.8%	94.1%	95.1%	97.6%	100.0%	92.0%	96.0%	96.9%	97.6%
Mean Weight	2.05	2.74	2.91	4.49	4.61	N/A	3.88	3.57	3.43	4.04

note: \* represents any black bass

**Smallmouth Bass (Target Sample)**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	2.30			0.29		0.68			-	0.82
<b>Density</b> (electrofishing)										
PSD	41			72		73			-	63
RSD (preferred)	13.0			46.0		40.0			-	48.5
CPUE (preferred)	-								-	10.4
CPUE (total)	73.5			25.2		29.0			-	21.3
CPUE $\geq$ Stock	71.2			24.9		28.4			-	11.2
CPUE $\geq$ Preferred	9.3			11.5		11.5			-	6.0
CPUE $\geq$ MLL (18-inches)	1.1			3.6		3.2			-	0.6
<b>Growth</b> (electrofishing)										
Length Age-1									-	-
Length Age-3									-	-
<b>Condition</b> (spring electrofishing)										
Stock	88.3			88.0		98.3			-	98.1
Quality	87.4			84.1		92.5			-	85.0
Preferred	89.6			86.6		91.0			-	85.6
Memorable	93.1			84.8		85.4			-	83.6
<b>Mortality</b> (electrofishing)										
Total Mortality									-	-

Samples taken at night unless otherwise noted.

**Spotted Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (spring electrofishing)	0.60	-	3.20	-	-	-	0.20	-	-	-
CPUE (mid-summer seine)	0.50	0.80	3.70	0.40	0.00	0.60	0.30	0.10	1.50	0.20
<b>Density</b> (spring electrofishing)										
PSD	37	-	57	-	-	-	-	-	-	-
RSD (preferred)	0	-	9	-	-	-	-	-	-	-
CPUE (total)	5.9	-	10.8	-	1.4	-	0.4	-	-	-
CPUE $\geq$ Stock	5.4	-	7.1	-	-	-	0.2	-	-	-
<b>Growth</b> (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	91.6	-	92.0	-	-	-	-	-	-	-
Quality	87.6	-	95.0	-	-	-	-	-	-	-
Preferred	-	-	98.0	-	-	-	-	-	-	-
<b>Mortality</b> (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate, num./hr (intended)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.03	N/A	N/A
Catch Rate, num.hr (any black bass)	1.00	0.88	0.92	1.06	0.75	0.66	0.76	0.97	0.68	0.96
Harvest Rate, num./hr (any black bass)	0.10	0.07	0.06	0.07	0.04	0.01	0.07	0.06	0.07	N/A
% Released	88.9%	89.8%	94.1%	97.1%	100.0%	100.0%	99.6%	100.0%	100.0%	100.0%
Mean Weight	2.05	2.74	2.91	1.30	N/A	N/A	1.60	-	N/A	N/A

**Black Crappie**

	2006	2007	2008	2009*	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.05	0.04	0.00	0.00	1.13		0.05	-	-	-
CPUE (mid-summer seine)										0.4
<b>Density</b> (electrofishing)										
PSD	100		-	63				83	-	-
RSD (preferred)	29		-	44				31	-	-
CPUE (total)	10.3		-	47.1	0.8			144.4	-	-
CPUE ≥ Stock	10.3		-	47.1				144.0	-	-
CPUE ≥ MLL (10-inches)	2.9		-	30.5				40.3	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-		-						-	-
Length Age-3	-		-						-	-
<b>Condition</b> (electrofishing)										
Stock	-		-	151.0				-	-	-
Quality	-		-	149.8				-	-	-
Preferred	-		-	125.3				-	-	-
Memorable	-		-	145.3				-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality									-	-
<b>Stocking</b>										
#	-	-	-	-					9,629	-
#/Acre	-	-	-	-					0.25	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	94,385	43,334	44,716	45,248	45,050	60,682	61,153	86,875	52,943	83,079
Angler Hours/Acre	2.38	1.09	1.13	1.14	1.14	1.53	1.56	2.23	1.35	2.13
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.68	1.78	2.44	1.32	1.69	1.64	1.96	2.79	1.75	1.74
Harvest Rate (any crappie)	0.76	0.87	1.05	0.65	0.83	0.71	0.83	1.15	1.01	0.97
% Released (black crappie)	55.7%	53.0%	60.3%	54.6%	49.6%	68.5%	52.8%	71.9%	47.4%	47.0%
Mean Weight (black crappie)	0.84	0.83	0.89	0.88	0.85	0.87	0.86	0.81	0.75	0.82
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$481,570	\$305,650	\$326,290	\$375,650	\$323,020	\$502,140	\$168,180	\$515,060	\$331,270	\$216,580

Non-target sample unless otherwise noted.

\* Targeted sample.

**Blacknose Crappie**

	2006	2007	2008	2009*	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE							0.06		-	-
<b>Density</b> (electrofishing)										
PSD								80	-	-
RSD (preferred)								30	-	-
CPUE (total)				3.3	0.2			16.1	-	-
CPUE $\geq$ Stock								16.1	-	-
CPUE $\geq$ MLL (10-inches)								4.4	-	-
<b>Growth</b> (electrofishing)										
Length Age-1									-	-
Length Age-3									-	-
<b>Condition</b> (electrofishing)										
Stock								-	-	-
Quality								-	-	-
Preferred								-	-	-
Memorable								-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality									-	-
<b>Stocking</b>										
#					139,586	79,671	161,672		218,050	26,283
#/Acre					3.5	2.0	4.1		5.58	0.7
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	94,385	43,334	44,716	45,248	45,050	60,682	61,153	86,875	52,943	83,079
Angler Hours/Acre	2.38	1.09	1.13	1.14	1.14	1.53	1.56	2.23	1.35	2.13
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.68	1.78	2.44	1.32	1.69	1.64	1.96	2.79	1.75	1.74
Harvest Rate (any crappie)	0.76	0.87	1.05	0.65	0.83	0.71	0.83	1.15	1.01	0.97
% Released (blacknose crappie)	47.7%	45.1%	8.0%	69.6%	41.3%	64.9%	31.8%	-	47.6%	50.2%
Mean Weight (blacknose crappie)	0.99	1.19	1.46	1.43	0.99	1.13	1.19	1.06	0.81	0.90
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$481,570	\$305,650	\$326,290	\$375,650	\$323,020	\$502,140	\$168,180	\$515,060	\$331,270	\$216,580

Non-target sample unless otherwise noted.

\* Targeted sample.

**White Crappie**

	2006	2007	2008	2009*	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.20	0.40	0.40	0.00	12.40	-	0.14	0.23	2.40	2.69
<b>Density</b> (electrofishing)										
PSD	97		100	100		-		74	57**	-
RSD (preferred)	40		88	87		-		32	57**	-
CPUE (total)	18.3		11.6	26.3	4.4	-		254.8	2.57**	-
CPUE ≥ Stock	18.3		11.6	26.3		-		254.4	0.08**	-
CPUE ≥ MLL (10-inches)	5.9		10.2	22.8		-		71.8	.06**	-
<b>Growth</b> (electrofishing)										
Length Age-1	-		-			-			-	-
Length Age-3	-		-			-			-	-
<b>Condition</b> (electrofishing)										
Stock	82.7		-	-		-		-	-	-
Quality	91.3		90.3	176.2		-		-	-	-
Preferred	87.1		88.8	163.7		-		-	-	-
Memorable	87.6		94.5	152.5		-		-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-			-			-	-
<b>Stocking</b>										
#	-	-	-	-		-			-	-
#/Acre	-	-	-	-		-			-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	94,385	43,334	44,716	45,248	45,050	60,682	61,153	86,875	52,943	83,079
Angler Hours/Acre	2.38	1.09	1.13	1.14	1.14	1.53	1.56	2.23	1.35	2.13
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.68	1.78	2.44	1.32	7.69	1.64	1.96	2.79	1.75	1.74
Harvest Rate (any crappie)	0.76	0.87	1.05	0.65	0.83	0.71	0.83	1.15	1.01	0.97
% Released (w hite crappie)	60.8%	42.3%	59.1%	48.7%	51.0%	56.4%	62.1%	63.5%	47.9%	45.6%
Mean Weight (w hite crappie)	0.71	0.72	0.84	0.78	0.85	0.84	0.81	0.73	0.74	0.81
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$481,570	\$305,650	\$326,290	\$375,650	\$323,020	\$502,140	\$168,180	\$515,060	\$331,270	\$216,580

Non-target sample unless otherwise noted.

\* Targeted sample.

\*\* Data collected from trap netting

**Sauger**

	2006	2007	2008	2009	2010*	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Substock CPUE					0.00				-	-
<b>Density</b> (gill netting)										
PSD					100				-	-
RSD (preferred)					63				-	-
CPUE (total)					9.8				-	-
CPUE > Stock					9.8				-	-
CPUE ≥ MLL (15-inches)					6.1				-	-
<b>Growth</b> (gill netting)										
Length Age-1									-	-
Length Age-3									-	-
<b>Condition</b> (gill netting)										
Stock									-	-
Quality					92.3				-	-
Preferred					93.4				-	-
Memorable					45.4				-	-
<b>Mortality</b> (gill netting)										
Total Mortality									-	-
<b>Stocking</b>										
#	204,365	99,301	174,339	121,100	33,725	-			-	-
#/Acre	5.2	2.5	4.4	3.1	0.9	-			-	-
<b>Angling Pressure</b> (creel)										
Angler Hours	13,436	10,299	9,236	12,593	10,891	12,793	11,910	1,241	1,914	N/A
Angler Hours/Acre	0.34	0.26	0.23	0.32	0.28	0.32	0.30	0.03	0.05	N/A
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.67	1.37	1.95	1.40	1.37	0.76	0.81	1.81	0.15	N/A
Harvest Rate (intended)	0.28	0.44	0.24	0.39	0.40	0.28	0.23	0.36	0.09	N/A
% Released	67.9%	71.4%	87.4%	70.7%	72.8%	72.8%	68.6%	75.1%	81.2%	71.0%
Mean Weight	1.55	1.64	1.58	1.60	1.53	1.46	1.57	1.52	1.27	1.55
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Sauger	\$71,530	\$64,830	\$75,540	\$90,340	\$76,550	\$54,680	\$38,230	\$13,930	\$15,540	N/A

\* These fish were collected by Eagle Bend Fish Hatchery as part of brood fish collections.



**Walleye**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Substock CPUE									-	-
<b>Density</b> (gill netting)										
PSD									-	-
RSD (preferred)									-	-
CPUE (total)									-	-
CPUE $\geq$ Stock									-	-
CPUE $\geq$ MLL (15-inches)									-	-
<b>Growth</b> (gill netting)										
Length Age-1									-	-
Length Age-3									435.0	-
<b>Condition</b> (gill netting)										
Stock									101.1	-
Quality									97.7	-
Preferred									97.3	-
Memorable									-	-
<b>Mortality</b> (gill netting)										
Total Mortality									-	-
<b>Stocking</b>										
#						222,316	339,281	252,460	332,666	232,509
#/Acre						5.6	8.6	6.5	8.5	5.9
<b>Angling Pressure</b> (creel)										
Angler Hours									1,925	6,444
Angler Hours/Acre									0.05	0.16
<b>Fishing Success</b> (creel)										
Catch Rate (intended)							-		0.05	1.29
Harvest Rate (intended)							-		0.00	0.50
% Released							81.8%		100.0%	68.7%
Mean Weight							1.91		N/A	1.61
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Walleye							-		\$11,160	\$13,900

**Striped Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Substock CPUE	0.13	-	0.05						-	
CPUE (mid-summer seine)										3
<b>Density</b> (gill netting)										
PSD	-	-	13						-	-
RSD (preferred)	3	-	2						-	-
CPUE (total)	0.2	-	0.4						-	-
CPUE ≥ Stock	0.1	-	0.3						-	-
CPUE ≥ 15-inches	0.1	-	-						-	-
<b>Growth</b> (gill netting)										
Length Age-2	-	-	-						-	-
Length Age-3	-	-	-						-	-
<b>Condition</b> (gill netting)										
Stock	94.4	-	99.4						-	-
Quality	-	-	81.8						-	-
Preferred	89.2	-							-	-
Memorable	-	-							-	-
<b>Mortality</b> (gill netting)										
Total Mortality		-							-	-
<b>Stocking</b>										
#	301,316	353,983		253,429	213,406	226,280	241,122	212,648	151,007	114,313
#/Acre	7.6	8.9	0.0	6.4	5.4	5.7	6.1	5.4	3.9	2.9
<b>Angling Pressure</b> (creel)										
Angler Hours	19,110	24,280	20,108	12,298	36,702	26,063	33,486	40,138	27,137	95,980
Angler Hours/Acre	0.48	0.61	0.51	0.31	0.93	0.66	0.86	1.03	0.69	2.46
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.81	0.53	0.38	0.72	0.85	0.54	0.41	0.86	0.61	0.37
Harvest Rate (intended)	0.21	0.14	0.11	0.23	0.08	0.02	0.01	0.12	0.07	0.11
% Released	73.1%	70.2%	79.1%	72.9%	89.7%	94.9%	98.2%	89.8%	88.5%	84.0%
Mean Weight	15.02	16.30	17.50	16.59	17.29	16.63	18.45	21.19	10.68	17.04
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Striped Bass	\$134,040	\$161,440	\$277,270	\$140,060	\$436,990	\$542,880	\$183,480	\$335,400	\$311,090	\$356,860

**Bluegill**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (electrofishing)	0.60									
CPUE (mid-summer seine)	21.40	12.10	7.30	17.40	6.70	6.00	3.80	7.30	2.70	16.10
Substock CPUE (trap netting)									2.65**	6.738
<b>Density</b> (electrofishing)										
PSD	16									-
RSD (preferred)	0									-
CPUE (total)	19.4								3.55**	-
CPUE $\geq$ Stock	18.8								0.9**	-
<b>Growth</b> (electrofishing)										
Length Age-1	-								-	-
Length Age-3	125.0								-	-
<b>Condition</b> (spring electrofishing)										
Stock	-								-	-
Quality	-								-	-
Preferred	-								-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-								-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all sunfish)	2,146	860	-	241	N/A	502	N/A	2,672	3,999	772
Angler Hours/Acre	0.1	0.0	-	0.0	N/A	0	N/A	0.1	0.1	0.02
<b>Fishing Success</b> (creel)										
Catch Rate (any sunfish)	0.89	8.86	-	14.62	N/A	0.00	N/A	2.24*	3.26*	4.62
Harvest Rate (any sunfish)	0.89	3.18	-	6.92	N/A	0.00	N/A	0.29*	.67*	0.00
% Released (bluegill)	66.3%	64.7%	85.7%	74.2%	94.7%	95.4%	84.3%	85.2%	83.4%	78.9%
Mean Weight (bluegill)	0.25	0.25	0.26	0.26	0.23	0.25	0.29	0.21	0.22	0.21
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Sunfish	\$2,640	\$2,440	-	\$2,080	N/A	\$8,710	N/A	\$7,560	\$15,320	\$1,620

Non-target sample unless otherwise noted.

\*Bluegill only

\*\* Data collected from trap netting

**Redear**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b>										
Substock CPUE (electrofishing)	0.00								-	-
CPUE (mid-summer seine)	0.00	0.20	0.00	0.10	0.00	0.80	1.30	0.10	-	-
<b>Density (electrofishing)</b>										
PSD	95								-	-
RSD (preferred)	27								-	-
CPUE (total)	8.8								-	-
CPUE ≥ Stock	8.8								-	-
<b>Growth (electrofishing)</b>										
Length Age-1	-								-	-
Length Age-3	-								-	-
<b>Condition (spring electrofishing)</b>										
Stock	-								-	-
Quality	-								-	-
Preferred	-								-	-
<b>Mortality (electrofishing)</b>										
Total Mortality	-								-	-
<b>Angling Pressure (creel)</b>										
Angler Hours (all sunfish)	2,146	860	N/A	241	N/A	540	N/A	2,672	3,999	772
Angler Hours/Acre	0.1	0.0	N/A	0.0	N/A	0	N/A	0.1	0.1	0.02
<b>Fishing Success (creel)</b>										
Catch Rate (any sunfish)	0.89	8.86	N/A	14.62	N/A	0.00	N/A	0.14*	.10*	4.62
Harvest Rate (any sunfish)	0.89	3.18	N/A	6.92	N/A	0.00	N/A	0.05*	.05*	0.00
% Released (redeer)				6.0%	39.0%	0.0%	26.5%	47.1%	60.3%	0.0%
Mean Weight (redeer)				0.43	0.34	0.60	0.31	0.35	0.32	0.35
<b>Value of Fishery (Trip Expenditures - creel)</b>										
All Sunfish	\$2,640	\$2,440	N/A	\$2,080	N/A	\$8,710	N/A	\$7,560	\$15,320	\$1,620

Non-target sample unless otherwise noted.

\*Redear only

**Catfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all catfish)	55,643	47,615	58,667	66,758	78,566	71,031	63,895	24,176	53,113	71,841
Angler Hours/Acre	1.41	1.20	1.48	1.69	1.98	1.79	1.63	0.62	1.36	1.84
<b>Fishing Success</b> (creel)										
Catch Rate (any catfish)	1.52	1.46	1.32	1.48	1.12	1.03	1.11	1.81	1.49	2.07
Harvest Rate (any catfish)	0.87	0.89	0.65	0.67	0.30	0.29	0.29	0.35	0.31	0.65
% Released (channel)	36.5%	41.4%	48.0%	62.2%	69.4%	58.1%	70.1%	76.1%	81.7%	51.9%
Mean Weight (channel)	2.88	3.30	3.02	2.89	2.91	3.23	2.82	3.10	2.80	3.07
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Catfish	\$353,330	\$328,660	\$405,610	\$503,670	\$577,920	\$399,810	\$185,020	\$189,640	\$412,880	\$234,620

**Shad**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (electrofishing)										
Alewife CPUE			-				-		-	-
Gizzard CPUE			29.2				13.2		72.0	-
Threadfin CPUE			102.0				59.2		9.2	-

**Habitat Enhancement - 2015**

Type of Work	Details	Quantity	
		New	Renovated
none performed			

**Water Quality Monitoring - 2015**

Parameter	Sampling Period	Water Quality
Temperature		
Dissolved Oxygen		
PH		
Conductivity		

## Region 4

## Boone Reservoir

### Description

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<b>Surface Area:</b> 4,520 acres	<b>Shoreline Distance:</b> 127 miles
<b>Counties:</b> Sullivan, Washington	<b>Drainage Area:</b> 1840 square miles
<b>Full Pool Elevation:</b> 1384 feet above mean sea level	<b>Mean Annual Fluctuation:</b> 54 feet
<b>Maximum Depth:</b> 122 feet	<b>Thermocline Depth:</b> 7 feet
<b>Mean Chlorophyll (Forebay):</b> 10.8 parts per million	<b>Shoreline Development:</b> 13%
<b>Trophic Status (Forebay):</b> Mesotrophic	<b>Trophic Index, Carlson (1977):</b> 53.9
<b>Hydraulic Retention Time:</b> 38 days	<b>Reservoir Age:</b> 63 years (dam completed 1952)
<b>Total Fishing Effort:</b> N/A (No creel in 2015)	<b>Total Value by Anglers:</b> N/A (No creel in 2015)

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### Summary:

\*Boone Reservoir water levels have been held at 10ft below winter pool elevations (1350-1355 feet above mean sea level) since November 2014.

### Electrofishing

The 2015 largemouth bass CPUE was a little below average, at 60.3 fish/hour. However, we collected a large percentage (40%) of fish between 10 and 14-inches. These fish should grow bigger in 2015 and recruit into larger size classes, which will increase the percentage of fish over the 15-inch MLL. The largemouth bass relative weights were about average for Boone Reservoir.

Smallmouth bass catch rates were above average for 2015, at 29.6 fish/hour. There is a large percentage of smallmouth bass between 9 to 13 inches (41%). Hopefully, these fish will recruit into the larger size classes and result in more fish for anglers to catch above the 15-inch MLL. The smallmouth bass relative weights were about average for Boone Reservoir.

Black crappie catch rates for 2015 were about average for Boone Reservoir. We also saw good percentages of crappie between 7 and 10-inches. These fish should recruit into larger size classes and result in more fish over the 10-inch MLL in 2016.

### Gill Netting

There was no winter striped bass gill-netting sample conducted in 2015. Data for morones was collected from summer shad gill-netting by catch.

### **Shad Netting**

Shad netting was conducted on Boone Reservoir in September of 2015. A total of five nets were set on the Watauga River arm and a total of five nets were set on the Holston River arm. Three shad species (Gizzard, Threadfin, and Alewife) were collected, weighed, and measured to determine densities and overall health of the shad populations on Boone Reservoir.

### **Habitat Enhancement**

Habitat enhancement work was conducted on Boone Reservoir. The work consisted of brush sites with recycled Christmas trees with rope and drive in anchors. There were a total of 325 trees placed in these areas for fish habitat.

### **Water Quality**

Water quality sampling was conducted at three sites on Boone Reservoir during the months of July, August, and September. The water quality samples were all normal for Boone Reservoir.

### **Lakeside Angling Summary**

<b>Total Effort and Expenditures</b>										
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Angling Pressure										
Angler Hours	85,905	840,985	no survey	no survey	147,294	no survey	no survey	no survey	132,714	no survey
Angler Hours Per Acre	19.0	18.6	no survey	no survey	32.6	no survey	no survey	no survey	29.4	no survey
Angler Trips	13,498	13,022	no survey	no survey	26,804	no survey	no survey	no survey	24,087	no survey
Value of Fishery (angler expenditures creel)										
All Species	\$160,020	\$166,960	no survey	no survey	\$511,340	no survey	no survey	no survey	\$534,030	no survey



**Black Bass, Boone Reservoir**

<b>Black Bass</b>		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Angling Pressure</b> (creel survey data)												
All Black Bass	(hrs)	51,416	49,352	86,235	no survey	82,967	70,850	no survey	no survey	82,216	no survey	70,506
	(hrs/acre)	11.4	10.9	19.1	no survey	18.4	15.7	no survey	no survey	18.2	no survey	15.6
Any Black Bass	(hrs)	49,785	47,724	84,872	no survey	81,263	70,007	no survey	no survey	81,617	no survey	69,211
	(hrs/acre)	11.0	10.6	18.8	no survey	18.0	15.5	no survey	no survey	18.1	no survey	15.3
Largemouth Bass	(hrs)	146	0	236	no survey	1,055	0	no survey	no survey	335	no survey	295
	(hrs/acre)	0.0	0.0	0.1	no survey	0.2	0.0	no survey	no survey	0.1	no survey	0.1
Smallmouth Bass	(hrs)	1,485	1,628	1,127	no survey	649	843	no survey	no survey	264	no survey	999
	(hrs/acre)	0.3	0.4	0.2	no survey	0.1	0.2	no survey	no survey	0.0	no survey	0.2
Spotted Bass	(hrs)	0	0	0	no survey	0	0	no survey	no survey	0	no survey	0
	(hrs/acre)	0.0	0.0	0.0	no survey	0.0	0.0	no survey	no survey	0.0	no survey	0.0
<b>Tournaments</b> (BITE program & creel survey data)												
# Tournaments (BITE)	2	none reported	none reported	7	none reported	none reported	none reported	none reported	none reported	none reported	none reported	4.5
Pounds/Angler Day (BITE)	2.84	none reported	none reported	4.64	none reported	none reported	none reported	none reported	none reported	none reported	none reported	3.74
Bass/Angler Day (BITE)	1.19	none reported	none reported	2.17	none reported	none reported	none reported	none reported	none reported	none reported	none reported	1.68
<b>Value of Fishery</b> (creel survey data - trip expenditures)												
All Black Bass		\$109,680	\$109,650	\$319,140	no survey	\$269,530	\$265,860	no survey	no survey	\$300,270	no survey	\$229,022
Any Black Bass		\$106,360	\$106,840	\$304,620	no survey	\$264,940	\$262,270	no survey	no survey	\$297,670	no survey	\$223,783
Largemouth Bass		\$620	\$0	\$2,360	no survey	\$3,400	\$0	no survey	no survey	\$1,640	no survey	\$1,337
Smallmouth Bass		\$2,700	\$2,810	\$12,160	no survey	\$1,190	\$3,590	no survey	no survey	\$960	no survey	\$3,902
Spotted Bass		\$0	\$0	\$0	no survey	\$0	\$0	no survey	no survey	\$0	no survey	\$0

**Largemouth Bass, Boone Reservoir****Largemouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Substock CPUE	3.7	13.0	18.0	20.0	13.5	17.7	8.0	no survey	4.6	10.3	12.1
<b>Density</b> (electrofishing data - CPUE = # fish/hour)											
PSD	89%	68%	72%	70%	68%	76%	70%	no survey	83%	57%	73%
RSD - Preferred	64%	46%	35%	38%	30%	32%	30%	no survey	33%	25%	37%
CPUE	38.4	58.3	108.0	95.4	99.0	110.0	70.2	no survey	48.3	60.3	76.4
CPUE ≥ Stock	34.7	44.8	89.7	75.4	85.5	92.3	62.2	no survey	43.7	50.0	64.3
CPUE ≥ MSL (15")	20.4	19.7	28.6	24.3	22.5	24.9	14.8	no survey	12.3	10.3	19.7
<b>Growth</b> (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	89.6	92.3	89.5	87.5	86.5	85.9	84.2	no survey	81.1	88.3	87.2
Quality - Preferred	89.2	95.2	91.8	88.9	85.3	86.3	88.0	no survey	82.3	87.8	88.3
Preferred - Memorable	95.6	94.5	94.7	90.6	88.0	87.8	90.0	no survey	86.3	89.9	90.8
Memorable - Trophy	98.1	92.0	93.1	96.7	83.2	89.7	101.3	no survey	96.4	86.4	93.0
Trophy	none	none	none	none	none	none	none	no survey	none	none	none
<b>Mortality</b> (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Fishing Success</b> (creel survey data)											
Catch Rate	0.14	0.16	0.23	no survey	0.32	0.36	no survey	no survey	0.23	no survey	0.21
Harvest Rate	0.01	0.01	0.00	no survey	0.01	0.01	no survey	no survey	0.00	no survey	0.01
Percent Harvested	5.2%	6.8%	1.9%	no survey	3.3%	2.1%	no survey	no survey	2.0%	no survey	4.3%
Mean Weight (pounds)	2.99	2.84	2.76	no survey	2.1	2.38	no survey	no survey	2.44	no survey	2.6725

**Smallmouth Bass, Boone Reservoir**

<b>Smallmouth Bass</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Substock CPUE	0.9	1.1	3.7	1.7	3.7	1.4	1.7	no survey	4.3	2.6	2.4
<b>Density</b> (electrofishing data - CPUE = # fish/hour)											
PSD	66%	79%	73%	73%	54%	73%	72%	no survey	63%	67%	69%
RSD - Preferred	37%	71%	50%	55%	17%	41%	43%	no survey	37%	40%	43%
CPUE	11.3	13.1	29.4	16.3	29.0	34.3	17.1	no survey	26.2	29.6	22.9
CPUE ≥ Stock	10.8	12.0	25.7	14.6	25.3	32.9	15.4	no survey	21.8	27.0	20.6
CPUE ≥ MSL (15")	3.1	6.0	7.4	5.4	2.8	8.0	4.8	no survey	5.5	7.0	5.6
<b>Growth</b> (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	90.2	85.5	86.1	83.5	82.4	83.9	82.3	no survey	79.4	81.9	83.9
Quality - Preferred	82.2	83.3	83.3	81.6	83.9	82.8	83.2	no survey	80.0	80.2	82.3
Preferred - Memorable	87.8	82.9	83.2	81.7	79.9	84.0	83.3	no survey	75.3	77.9	81.8
Memorable - Trophy	78.6	80.6	79.8	80.6	80.5	82.9	80.9	no survey	69.3	75.5	78.7
Trophy	none	none	none	none	none	none	none	no survey	none	none	none
<b>Mortality</b> (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Fishing Success</b> (creel survey data)											
Catch Rate	0.13	0.14	0.21	no survey	0.21	0.19	no survey	no survey	0.16	no survey	0.17
Harvest Rate	0.01	0.01	0.00	no survey	0.00	0.01	no survey	no survey	0.01	no survey	0.01
Percent Harvested	8.6%	6.5%	3.6%	no survey	2.1%	3.2%	no survey	no survey	5.3%	no survey	4.9%
Mean Weight (pounds)	2.41	2.4	2.62	no survey	3.02	2.81	no survey	no survey	2.56	no survey	2.64

**Spotted Bass, Boone Reservoir**

<b>Spotted Bass</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Substock CPUE	0.0	0.0	0.0	0.0	0.0	0.3	1.1	no survey	0.6	0.0	0.2
<b>Density</b> (electrofishing data - CPUE = # fish/hour)											
PSD	none	50%	100%	0%	100%	58%	8%	no survey	38%	15%	46%
RSD - Preferred	none	0%	0%	0%	0%	12%	8%	no survey	6%	80%	13%
CPUE	0.0	0.6	2.0	2.0	0.6	7.7	4.5	no survey	16.0	15.3	5.4
CPUE ≥ Stock	0.0	0.6	2.0	2.0	0.6	7.4	3.4	no survey	16.6	15.3	5.3
<b>Growth</b> (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	none	88.6	none	101.1	none	95.6	92.0	no survey	92.5	none	94.0
Quality - Preferred	none	97.7	106.6	none	91.8	94.0	none	no survey	88.2	113.4	98.6
Preferred - Memorable	none	none	none	none	none	94.5	85.8	no survey	97.8	107.6	96.4
Memorable - Trophy	none	none	none	none	none	none	none	no survey	none	94.9	none
Trophy	none	none	none	none	none	none	none	no survey	none	none	none
<b>Mortality</b> (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Fishing Success</b> (creel survey data)											
Catch Rate	N/A	N/A	0.01	no survey	0.04	0.04	no survey	no survey	0.07	no survey	0.04
Harvest Rate	N/A	N/A	0.00	no survey	0.00	0.00	no survey	no survey	0.00	no survey	0.00
Percent Harvested	N/A	N/A	0%	no survey	4.6%	1%	no survey	no survey	0.0%	no survey	1.5%
Mean Weight (pounds)	N/A	N/A	N/A	no survey	1.65	1.00	no survey	no survey	N/A	no survey	1.33

**White Crappie, Boone Reservoir**

<b>White Crappie</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (electrofishing data - CPUE = # fish/ hour)											
Age-0 CPUE	none	none	none	none	none	none	none	no survey	none	none	N/A
Substock CPUE	none	none	none	none	none	none	none	no survey	none	none	N/A
<b>Density</b> (electrofishing data - CPUE = # fish/ hour)											
PSD	100%	none	100%	100%	100%	100%	100%	no survey	100%	100%	100%
RSD - Preferred	50%	none	100%	100%	89%	0%	50%	no survey	0%	89%	60%
CPUE	0.6	0.0	0.3	0.3	2.6	0.6	0.6	no survey	0.3	3.0	0.9
CPUE ≥ Stock	0.3	0.0	0.3	0.3	2.6	0.6	0.6	no survey	0.3	3.0	0.9
CPUE ≥ MSL (10")	0.3	0.0	0.3	0.3	2.3	0.0	0.3	no survey	0.0	2.6	0.7
<b>Growth</b> (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	none	none	none	none	none	none	none	no survey	none	none	none
Quality - Preferred	105.5	none	none	none	110.9	109.2	89.0	no survey	102.0	113.4	105.0
Preferred - Memorable	92.4	none	none	none	98.2	none	none	no survey	none	107.5	99.4
Memorable - Trophy	none	none	96.7	94.2	99.4	none	100.0	no survey	none	94.8	97.0
Trophy	none	none	none	none	none	none	none	no survey	none	none	none
<b>Mortality</b> (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Stocking</b>											
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Angling Pressure</b> (creel survey data - any crappie)											
Angler Hours	8,748	8,783	8,067	no survey	4,367	4,669	no survey	no survey	3,109	no survey	6,291
Angler Hours/Acre	1.9	1.9	1.8	no survey	1.0	1.0	no survey	no survey	0.6	no survey	1.4
<b>Fishing Success</b> (creel survey data)											
Catch Rate	0.01	0.02	0.65	no survey	0.05	0.01	no survey	no survey	N/A	no survey	0.15
Harvest Rate	0.01	0.01	0.22	no survey	0.01	none	no survey	no survey	N/A	no survey	0.06
Percent Harvested	100.0%	79.5%	30.0%	no survey	18.2%	none	no survey	no survey	N/A	no survey	56.9%
Mean Weight (pounds)	1.07	1.08	0.81	no survey	1.1	none	no survey	no survey	N/A	no survey	1.015
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Any Crappie	\$12,820	\$13,860	\$20,710	no survey	\$7,730	\$6,850	no survey	no survey	\$8,990	no survey	\$11,827

**Black Crappie, Boone Reservoir**

<b>Black Crappie</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Mean</b>
<b>Recruitment</b> (electrofishing data) - CPUE = # fish/ hour											
Age-0 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Substock CPUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	no survey	0.0	0.0	0.0
<b>Density</b> (electrofishing data - CPUE = # fish/ hour)											
PSD	100%	100%	91%	92%	90%	96%	75%	no survey	82%	100%	92%
RSD - Preferred	100%	72%	52%	44%	42%	51%	33%	no survey	36%	81%	57%
CPUE	0.9	8.3	13.1	17.4	8.9	15.1	6.9	no survey	7.4	9.0	9.7
CPUE ≥ Stock	0.9	8.3	13.1	17.4	8.9	15.1	6.9	no survey	7.4	9.0	9.7
CPUE ≥ MSL (10")	0.9	6.0	6.6	6.9	3.1	7.4	2.0	no survey	3.1	6.3	4.7
<b>Growth</b> (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	none	none	92.8	88.0	91.9	93.1	90.0	no survey	93.0	none	91.5
Quality - Preferred	none	98.1	95.9	90.2	86.0	91.0	87.5	no survey	85.0	92.90	90.8
Preferred - Memorable	76.2	90.9	92.0	89.5	89.0	88.7	87.2	no survey	88.3	85.70	87.5
Memorable - Trophy	88.9	89.6	86.5	87.7	77.8	87.5	81.6	no survey	83.0	79.90	84.7
Trophy	none	none	none	none	none	none	none	no survey	none	none	none
<b>Mortality</b> (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Stocking</b>											
# per Acre	0.0	6.1	10.6	10.7	0.0	10.4	10.8	13.9	9.8	5.0	7.7
<b>Angling Pressure</b> (creel survey data - any crappie)											
Angler Hours	8,748	8,783	8,067	no survey	4,367	4,669	no survey	no survey	3,109	no survey	6,291
Angler Hours/Acre	1.9	1.9	1.8	no survey	1.0	1.0	no survey	no survey	0.6	no survey	1.4
<b>Fishing Success</b> (creel survey data)											
Catch Rate	0.09	0.11	0.58	no survey	0.57	0.46	no survey	no survey	0.56	no survey	0.40
Harvest Rate	0.07	0.07	0.14	no survey	0.34	0.30	no survey	no survey	0.26	no survey	0.20
Percent Harvested	69.2%	53.6%	22.5%	no survey	60.1%	64.2%	no survey	no survey	75.0%	no survey	57.4%
Mean Weight (pounds)	0.88	0.86	0.91	no survey	1.13	0.97	no survey	no survey	1.44	no survey	1.031667
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Any Crappie	\$12,820	\$13,860	\$20,710	no survey	\$7,730	\$6,850	no survey	no survey	\$8,990	no survey	\$11,827

**Striped Bass, Boone Reservoir**

<b>Striped Bass</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (summer shad gill net data - CPUE = # fish/net night)											
Substock CPUE	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
<b>Density</b> (summer shad gill net data - CPUE = # fish/net night)											
PSD	40%	0%	23%	27%	52%	63%	60%	24%	24%	50%	36%
RSD - Preferred	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%
CPUE	0.5	0.7	2.0	4.8	2.5	1.5	0.3	0.9	0.7	1.7	1.5
CPUE ≥ Stock	0.5	0.7	2.0	4.7	2.4	1.5	0.3	0.9	0.7	1.7	1.5
CPUE ≥ 15"	0.3	0.5	3.5	3.6	2.2	1.4	0.2	0.8	0.6	1.5	1.4
<b>Growth</b> (summer shad gill net data)											
Mean TL at Age-1 (mm)	370	399	384	385	367	369	387	365	N/A	360	376
Mean TL at Age-3 (mm)	673	N/A	N/A	664	621	608	N/A	603	508	564	606
<b>Relative Weight</b> (winter gill net; data 300' nets)											
Stock - Quality	N/A	N/A	98.6	103.5	111.8	no survey	96.5	none	107.9	no survey	103.7
Quality - Preferred	106.8	N/A	95.2	93.3	92.1	no survey	91.9	99.6	106.7	no survey	97.9
Preferred - Memorable	92.2	78	N/A	97.3	92.5	no survey	84.9	93.0	96.0	no survey	90.6
Memorable - Trophy	93.7	N/A	93.4	none	none	no survey	none	64.8	none	no survey	84.0
Trophy	N/A	N/A	N/A	none	none	no survey	none	none	none	no survey	N/A
<b>Mortality</b> (summer shad gill net data)											
Total Mortality	*	*	*	*	*	*	*	*	*	*	*
<b>Stocking</b>											
# per Acre	5.6	9.9	5.9	6.2	5.7	5.6	5.2	4.9	2.2	2.7	5.4
<b>Angling Pressure</b> (creel survey data - striped bass only)											
Angler Hours	9,069	8,798	10,954	no survey	16,310	12,037	no survey	no survey	6,875	no survey	10,674
Angler Hours/Acre	2.0	1.9	2.4	no survey	3.6	2.7	no survey	no survey	1.5	no survey	2.4
<b>Fishing Success</b> (creel survey data - striped bass only)											
Catch Rate	0.04	0.03	0.05	no survey	0.19	0.15	no survey	no survey	0.39	no survey	0.14
Harvest Rate	0.01	0.01	0.00	no survey	0.03	0.02	no survey	no survey	0.01	no survey	0.01
Percent Harvested	23.9%	20.3%	5.6%	no survey	11.1%	15.5%	no survey	no survey	3.7%	no survey	13.4%
Mean Weight (pounds)	9.96	10.55	16.16	no survey	11.13	6.55	no survey	no survey	14.8	no survey	11.525
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Any Morones	\$9,500	\$13,990	\$770	no survey	\$13,980	\$11,800	no survey	no survey	\$144,960	no survey	\$32,500
Striped Bass Only	\$15,990	\$15,080	\$42,810	no survey	\$130,950	\$59,550	no survey	no survey	\$48,320	no survey	\$52,117

**Hybrid Striped Bass, Boone Reservoir****Hybrid Striped Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (summer shad gill net data - CPUE = # fish/net night)											
Substock CPUE	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.00	0.0	0.00	0.0
<b>Density</b> (summer shad gill net data - CPUE = # fish/net night)											
PSD	78%	100%	100%	97%	100%	100%	100%	98%	98%	100%	97%
RSD - Preferred	50%	78%	85%	71%	87%	88%	91%	95%	95%	100%	84%
CPUE	2.8	1.4	4.1	3.9	3.9	2.3	2.3	2.1	0.8	0.8	2.4
CPUE ≥ Stock	2.8	1.4	4.1	3.9	3.9	2.2	2.3	2.1	0.8	0.8	2.4
CPUE ≥ MSL (15")	1.3	1.1	3.5	2.7	3.1	1.8	2.0	1.8	0.6	0.6	1.8
<b>Growth</b> (summer shad gill net data)											
Mean TL at Age-1 (mm)	347	370	407	353	385	366	356	352	N/A	389	369.4
Mean TL at Age-3 (mm)	584	560	576	554	549	504	538	530	505	531	543
<b>Relative Weight</b> (winter gill net data)											
Stock - Quality	none	168.3	none	none	none	no survey	none	none	none	no survey	168.3
Quality - Preferred	93.1	none	none	none	none	no survey	none	none	92.2	no survey	92.7
Preferred - Memorable	90.4	98.9	95.2	90.8	93.6	no survey	88.0	105.5	95.7	no survey	94.8
Memorable - Trophy	90.8	91.1	98.2	91.7	90.8	no survey	88.3	100.4	95.0	no survey	93.3
Trophy	none	none	none	none	none	no survey	none	none	none	no survey	N/A
<b>Mortality</b> (summer shad gill net data)											
Total Mortality	*	*	*	*	*	*	*	*	35%	*	*
<b>Stocking</b>											
# per Acre	2.7	3.2	5.1	6.9	4.9	7.2	7.7	5.6	7.1	2.9	5.3
<b>Angling Pressure</b> (creel survey data - hybrid striped bass only)											
Angler Hours	9,069	260	2,300	no survey	4,236	1,576	no survey	no survey	447	no survey	2,981
Angler Hours/Acre	2.0	0.1	0.5	no survey	0.9	0.3	no survey	no survey	0.1	no survey	0.7
<b>Fishing Success</b> (creel survey data - hybrid striped bass only)											
Catch Rate	0.02	0.02	0.02	no survey	0.21	0.09	no survey	no survey	0.38	no survey	0.12
Harvest Rate	0.02	0.02	0.00	no survey	0.03	0.00	no survey	no survey	0.04	no survey	0.02
Percent Harvested	32.5%	31.1%	17.3%	no survey	14.0%	9.6%	no survey	no survey	24.5%	no survey	21.5%
Mean Weight (pounds)	2.96	3.03	4.64	no survey	6.19	4.12	no survey	no survey	6.6	no survey	4.59
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Any Morones	\$9,500	\$13,990	\$770	no survey	\$13,980	\$11,800	no survey	no survey	\$144,960	no survey	\$32,500
Hybrid Striped Bass Only	\$0	\$550	\$6,240	no survey	\$17,320	\$4,110	no survey	no survey	\$0	no survey	\$4,703



**Sunfish, Boone Reservoir**

<b>Sunfish</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Angling Pressure</b> (creel survey data - any sunfish)											
Angler Hours	833	1,955	6,985	no survey	6,968	5,757	no survey	no survey	4,801	no survey	4,550
Angler Hours/Acre	0.2	0.4	1.5	no survey	1.5	1.3	no survey	no survey	1.1	no survey	1.0
<b>Fishing Success</b> (creel survey data - bluegill only)											
Catch Rate (bluegill)	1.58	2.16	3.01	no survey	3.53	2.65	no survey	no survey	2.15	no survey	2.513333
Harvest Rate (bluegill)	0.27	0.55	0.42	no survey	0.63	0.26	no survey	no survey	0.17	no survey	0.383333
% Harvested (bluegill)	4.1%	58.6%	4.6%	no survey	10.3%	6.4%	no survey	no survey	6.1%	no survey	15.0%
Mean Weight (bluegill)	0.26	0.22	0.26	no survey	0.31	0.35	no survey	no survey	0.22	no survey	0.27
<b>Value of Fishery</b> (creel survey data - trip expenditures only)											
Any Sunfish	\$610	\$1,960	\$7,880	no survey	\$10,170	\$5,490	no survey	no survey	\$5,400	no survey	\$5,252

**Catfish, Boone Reservoir**

<b>Catfish</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Angling Pressure</b> (creel survey data - all catfish)											
Angler Hours	1,901	1,978	2,421	no survey	1,184	2,967	no survey	no survey	213	no survey	1,777
Angler Hours/Acre	0.4	0.4	0.5	no survey	0.3	0.7	no survey	no survey	0.0	no survey	0.4
<b>Fishing Success</b> (creel survey data)											
Catch Rate (channel cat)	0.16	0.21	0.15	no survey	0.35	0.27	no survey	no survey	0	no survey	0.19
Harvest Rate (channel cat)	0.16	0.20	0.11	no survey	0.14	0.17	no survey	no survey	0	no survey	0.13
% Harvested (channel cat)	65.6%	77.9%	20.1%	no survey	31.3%	20.4%	no survey	no survey	46.5%	no survey	43.6%
Mean Weight (channel cat)	3.14	2.93	4.95	no survey	2.29	3.69	no survey	no survey	3.83	no survey	3.47
<b>Value of Fishery</b> (creel survey data - trip expenditures only)											
Any Catfish	\$4,040	\$4,270	\$5,980	no survey	\$1,390	\$3,840	no survey	no survey	\$280	no survey	\$3,300

**Shad, Boone Reservoir**

<b>Shad</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Density</b> (summer shad gill net data - geometric mean density)											
Gizzard Shad	25.9	23.9	8.9	9.0	5.8	11.6	6.3	6.9	8.0	15.5	12.2
Threadfin Shad	11.2	40.2	5.0	1.3	1.5	0.1	2.1	3.2	1.4	0.0	6.6
Alewife	2.4	3.3	7.3	3.2	9.4	28.2	5.5	7.1	2.9	15.2	8.5

**Habitat Enhancement, Boone Reservoir**

Type of Work	Details	Quantity	
		New	Renovated
Planted			
Rebrushed			
Checked and Refurbished	Christmas Trees		1 site, 175 Trees
Rebrushed			
Added			
Installed	Christmas Trees	1 site, 150 Trees	

**Water Quality Monitoring, Boone Reservoir**

Parameter	Sampling Period	Water Quality
Temperature	July to August	normal
Dissolved Oxygen	July to August	normal

## Cherokee Reservoir

### Description

**Area:** 30,300 acres

**Shoreline:** 393 miles

**Counties:** Jefferson, Grainger, Hamblen, and Hawkins

**Full Pool Elevation (feet-msl):** ~1070

**Winter Pool Elevation (feet-msl):** ~1040

**Dam Completion:** 1941

### Lakewide Angling Summary

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	405,366	-	407,673	-	-	-	-	567,593	-	286,212
Angler Hours Per Acre	13.4	-	13.5	-	-	-	-	18.7	-	9.4
Angler Trips	74,377	-	78,461	-	-	-	-	88,384	-	49,167
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	852,750	-	972,470	-	-	-	-	2,846,760	-	1,530,150

### Black Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	181,976	-	189,452	-	-	-	-	358,306	-	136,315
(hrs/acre)	6.01	-	6.25	-	-	-	-	11.83	-	4.50
Any Black Bass (hrs)	946	-	702	-	-	-	-	19,757	-	71,785
(hrs/acre)	0.03	-	0.02	-	-	-	-	0.65	-	2.37
Largemouth Bass (hrs)	177,852	-	188,140	-	-	-	-	332,053	-	52,988
(hrs/acre)	5.87	-	6.21	-	-	-	-	10.96	-	1.75
Smallmouth Bass (hrs)	3,178	-	610	-	-	-	-	6,151	-	9,897
(hrs/acre)	0.10	-	0.02	-	-	-	-	0.20	-	0.33
Spotted Bass (hrs)	0	-	0	-	-	-	-	345	-	1,645
(hrs/acre)	0.00	-	0.00	-	-	-	-	0.01	-	0.05
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	\$523,450	-	\$709,440	-	-	-	-	\$1,974,960	-	\$763,610
Any Black Bass	\$6,320	-	\$0	-	-	-	-	\$55,890	-	\$380,130
Largemouth Bass	\$509,540	-	\$707,520	-	-	-	-	\$1,898,930	-	\$190,030
Smallmouth Bass	\$7,590	-	\$1,920	-	-	-	-	\$18,570	-	\$189,920
Spotted Bass	\$0	-	\$0	-	-	-	-	\$1,570	-	\$3,530

**Largemouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	4.53	8.00	6.67	3.47	3.73	-	-	5.60	3.73	-
<b>Density</b> (electrofishing)										
PSD	72	79	68	86	78	-	-	82	85	-
RSD (preferred)	47	55	33	44	36	-	-	41	53	-
CPUE (total)	61.3	53.6	60.8	58.7	79.2	-	-	47.5	62.1	-
CPUE ≥ Stock	56.8	45.6	54.1	55.2	75.5	-	-	36.3	58.4	-
CPUE ≥ MLL (15-inches)	26.7	25.1	17.6	24.5	26.9	-	-	17.1	29.6	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	89.5	88.9	89.1	87.6	82.0	-	-	86.2	76.8	-
Quality	89.7	93.6	93.6	93.3	85.3	-	-	88.2	82.2	-
Preferred	93.2	93.9	93.5	94.9	84.5	-	-	89.3	84.1	-
Memorable	88.2	94.3	91.7	84.1	92.3	-	-	89.8	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.74	-	0.62	-	-	-	-	0.72	-	0.50
Harvest Rate (intended)	0.01	-	0.01	-	-	-	-	0.15	-	0.02
% Released	98.7%	-	98.3%	-	-	-	-	76.7%	-	96.2%
Mean Weight	2.37	-	2.34	-	-	-	-	2.96	-	1.09

**Smallmouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										target
Substock CPUE	0.00	0.53	0.00	0.00	0.00	-	-	0.00	0.53	-
<b>Density</b> (electrofishing)										
PSD	60	71	100	100	91	-	-	95	84	-
RSD (preferred)	50	71	100	100	73	-	-	73	64	-
CPUE (preferred)	0.5	0.3	0.8	0.8	6.4	-	-	5.3	5.3	-
CPUE (memorable)	0.8	0.8	0.8	0.5	2.1	-	-	1.9	2.1	-
CPUE (trophy)	0.0	0.3	0.0	0.0	0.0	-	-	0.0	0.0	-
CPUE (total)	4.5	2.4	1.6	1.3	8.8	-	-	9.9	12.3	-
CPUE $\geq$ Stock	4.5	1.9	1.6	1.3	8.8	-	-	9.9	11.7	-
CPUE $\geq$ Preferred	1.3	1.4	1.6	1.3	8.5	-	-	7.2	7.4	-
CPUE $\geq$ MLL (18-inches)	0.8	1.1	0.8	0.3	0.5	-	-	0.5	0.1	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	4.2
Length Age-3	-	-	-	-	-	-	-	-	-	13.0
<b>Condition</b> (spring electrofishing)										
Stock	92.1	81.0	-	-	78.6	-	-	85.2	78.3	78.0
Quality	77.4	-	-	-	83.8	-	-	81.4	81.6	78.5
Preferred	95.2	87.1	90.4	89.0	82.5	-	-	82.2	78.4	77.9
Memorable	90.4	84.8	86.3	91.6	79.5	-	-	80.7	74.2	79.8
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	46%
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.39	-	0.29	-	-	-	-	0.72	-	0.91
Harvest Rate (intended)	0.00	-	0.00	-	-	-	-	0.15	-	0.05
% Released	98.6%	-	98.8%	-	-	-	-	76.7%	-	93.4%
Mean Weight	3.19	-	1.74	-	-	-	-	2.96	-	3.08

**Spotted Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	0.00	0.00	0.80	0.27	0.00	-	-	1.33	0.27	-
<b>Density</b> (electrofishing)										
PSD	46	30	56	77	71	-	-	66	59	-
RSD (preferred)	8	4	9	19	29	-	-	0	18	-
CPUE (total)	3.5	7.2	9.3	8.5	9.3	-	-	9.1	4.8	-
CPUE $\geq$ Stock	3.5	7.2	8.5	8.3	9.3	-	-	7.8	4.5	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	93.5	100.7	99.4	104.0	89.5	-	-	98.9	85.2	-
Quality	97.5	106.7	99.5	105.4	93.8	-	-	95.5	89.4	-
Preferred	100.0	110.2	100.7	102.8	92.1	-	-	-	88.9	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	-	-	-	-	0.40	-	0.29
Harvest Rate (intended)	-	-	-	-	-	-	-	0.00	-	0.14
% Released	88.8%	-	92.0%	-	-	-	-	77.6%	-	97.3%
Mean Weight	1.05	-	1.18	-	-	-	-	2.30	-	-

**Black Crappie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.20	0.50	0.10	0.09	-	0.41	0.31	0.07	0.58	-
<b>Density</b> (trap netting)										
PSD	90	83	85	89	-	69	96	95	77	-
RSD (preferred)	49	42	44	62	-	13	67	75	57	-
CPUE (total)	5.3	6.5	1.9	2.1	-	7.1	5.6	2.9	2.8	-
CPUE ≥ Stock	5.1	6.0	1.8	2.0	-	6.7	5.3	2.8	2.2	-
CPUE ≥ MLL (10-inches)	2.5	2.5	0.8	1.2	-	0.8	3.3	2.0	1.2	-
<b>Growth</b> (trap netting)										
Length Age-1	-	-	-	-	-					-
Length Age-3	-	-	-	-	-					-
<b>Condition</b> (trap netting)										
Stock	100.3	97.8	102.5	94.2	-	100.1	91.3	97.7	75.1	-
Quality	97.9	98.5	99.0	103.3	-	101.1	94.2	90.5	92.9	-
Preferred	95.9	96.7	92.8	93.9	-	96.9	97.7	92.4	88.9	-
Memorable	94.0	97.6	94.3	92.0	-	95.2	95.8	93.7	87.9	-
<b>Mortality</b> (trap netting)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	56,071	72,775	62,582	139,068	103,099	0	0	41,937	116,004	252,781
#/Acre	1.9	2.4	2.1	4.6	3.4	0.0	0.0	1.4	3.8	8.3
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	66,884	-	83,486	-	-	-	-	41,750	-	14,809
Angler Hours/Acre	2.2	-	2.8	-	-	-	-	1.4	-	0.5
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.58	-	1.17	-	-	-	-	2.36	-	0.76
Harvest Rate (any crappie)	0.51	-	0.52	-	-	-	-	0.86	-	0.71
% Released (black crappie)	69.4%	-	55.5%	-	-	-	-	66.2%	-	0.0%
Mean Weight (black crappie)	0.78	-	0.77	-	-	-	-	0.45	-	0.57
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$16,870	-	\$35,160	-	-	-	-	\$158,520	-	\$39,230

**Striped Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (gill netting)										
PSD	86	-	69	83	98	-	92	-	-	-
RSD (preferred)	43	-	-	-	-	-	23	-	-	-
CPUE (total)	1.2	-	2.2	12.9	5.6	-	2.2	-	-	-
CPUE ≥ Stock	1.2	-	2.2	12.9	5.6	-	2.2	-	-	-
CPUE ≥ 15-inches	1.2	-	2.2	12.9	5.6	-	2.2	-	-	-
<b>Growth</b> (gill netting)										
Length Age-2	-	17.7	17.2	18.2	-	-	-	-	-	18.2
Length Age-3	-	22.0	23.2	23.2	-	-	-	-	-	23.2
<b>Condition</b> (gill netting)										
Stock	108.1	-	87.5	107.2	94.0	-	113.3	-	-	92.2
Quality	94.1	-	86.6	98.7	94.0	-	101.3	-	-	92.5
Preferred	74.6	-	-	-	-	-	95.1	-	-	-
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Mortality</b> (gill netting)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	168,434	151,818	0	0	72,039	72,997	61,472	92,180	25,399	71,748
#/Acre	5.6	5.0	0.0	0.0	2.4	2.4	2.0	3.0	0.8	2.4
<b>Angling Pressure</b> (creel)										
Angler Hours	44,587	-	23,301	-	-	-	-	87,431	-	18,162
Angler Hours/Acre	1.5	-	0.8	-	-	-	-	2.9	-	0.6
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.11	-	0.11	-	-	-	-	0.33	-	0.28
Harvest Rate (intended)	0.05	-	0.05	-	-	-	-	0.15	-	0.02
% Released	62.3%	-	76.0%	-	-	-	-	52.8%	-	75.8%
Mean Weight	12.49	-	8.51	-	-	-	-	7.19	-	4.79
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Striped Bass	\$165,590	-	\$73,040	-	-	-	-	\$408,570	-	\$78,290



**Hybrid Striped Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (gill netting)										
PSD	100	-	100	100	100	-	100	-	-	-
RSD (preferred)	95	-	99	100	100	-	99	-	-	-
CPUE (total)	14.3	-	15.7	17.0	11.3	-	81.8	-	-	-
CPUE ≥ Stock	14.3	-	15.7	17.0	11.3	-	81.8	-	-	-
CPUE ≥ 15-inches	14.0	-	15.7	17.0	11.3	-	81.0	-	-	-
<b>Growth</b> (gill netting)										
Length Age-2	16.9	18.8	18.0	17.2	-	-	-	-	-	17.2
Length Age-3	21.1	20.0	20.7	20.7	-	-	-	-	-	20.7
<b>Condition</b> (gill netting)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	95.4	-	-	-	-	-	105.7	-	-	98.0
Preferred	96.3	-	101.8	102.5	100.2	-	104.6	-	-	98.3
Memorable	93.3	-	99.1	100.8	97.9	-	106.4	-	-	95.7
<b>Mortality</b> (gill netting)										
Total Mortality	-	-	32.0%	-	-	-	-	-	-	-
<b>Stocking</b>										
#	56,882	55,006	85,382	85,741	82,906	44,160	43,700	22,512	53,997	74,501
#/Acre	1.9	1.8	2.8	2.8	2.7	1.5	1.4	0.7	1.8	2.5
<b>Angling Pressure</b> (creel)										
Angler Hours	40,713	-	44,202	-	-	-	-	-	-	33,309
Angler Hours/Acre	1.3	-	1.5	-	-	-	-	-	-	1.1
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.48	-	0.61	-	-	-	-	-	-	0.29
Harvest Rate (intended)	0.18	-	0.21	-	-	-	-	-	-	0.07
% Released	67.7%	-	70.4%	-	-	-	-	-	-	56.4%
Mean Weight	5.18	-	6.63	-	-	-	-	-	-	6.11
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Hybrid Striped Bass	\$107,330	-	\$114,290	-	-	-	-	-	-	\$195,800

**Walleye**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Stocking</b>										
#	75,629	146,959	168,535	79,420	158,512	92,220	46,375	42,504	109,940	80,150
#/Acre	2.5	4.9	5.6	2.6	5.2	3.0	1.5	1.4	3.6	2.6
<b>Angling Pressure</b> (creel)										
Angler Hours	6,805	-	3,390	-	-	-	-	931	-	17,796
Angler Hours/Acre	0.2	-	0.1	-	-	-	-	0.0	-	0.6
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.78	-	0.27	-	-	-	-	0.00	-	0.32
Harvest Rate (intended)	0.32	-	0.07	-	-	-	-	0.00	-	0.17
% Released	58.0%	-	89.1%	-	-	-	-	0.0%	-	46.5%
Mean Weight	2.47	-	2.41	-	-	-	-	1.66	-	2.15
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Walleye	\$7,670	-	\$0	-	-	-	-	\$1,870	-	\$68,370

**Saugeye**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Stocking</b>										
#	0	0	0	0	0	0	1,600	104,322	195,020	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.4	6.4	0.0
<b>Angling Pressure</b> (creel)										
Angler Hours	-	-	-	-	-	-	-	-	-	-
Angler Hours/Acre	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	-	-	-	-	-	-	-
Harvest Rate (intended)	-	-	-	-	-	-	-	-	-	-
% Released	-	-	-	-	-	-	-	-	-	-
Mean Weight	-	-	-	-	-	-	-	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Saugeye	-	-	-	-	-	-	-	-	-	-

**Sunfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all sunfish)	4,069	-	4,361	-	-	-	-	17,537	-	3,442
Angler Hours/Acre	0.1	-	0.1	-	-	-	-	0.6	-	0.1
<b>Fishing Success</b> (creel)										
Catch Rate (any sunfish)	1.81	-	1.86	-	-	-	-	1.45	-	3.46
Harvest Rate (any sunfish)	0.87	-	0.75	-	-	-	-	0.54	-	2.85
% Released (bluegill)	57.0%	-	52.9%	-	-	-	-	64.9%	-	60.5%
Mean Weight (bluegill)	0.25	-	0.26	-	-	-	-	0.18	-	0.17
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Sunfish	\$2,750	-	\$3,170	-	-	-	-	\$40,870	-	\$3,530

**Catfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all catfish)	36,195	-	39,978	-	-	-	-	14,782	-	10,909
Angler Hours/Acre	1.2	-	1.3	-	-	-	-	0.5	-	0.4
<b>Fishing Success</b> (creel)										
Catch Rate (any catfish)	0.78	-	0.64	-	-	-	-	0.54	-	0.52
Harvest Rate (any catfish)	0.52	-	0.41	-	-	-	-	0.33	-	0.41
% Released (channel)	38.2%	-	44.1%	-	-	-	-	45.8%	-	14.9%
Mean Weight (channel)	1.82	-	1.57	-	-	-	-	1.37	-	3.01
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Catfish	\$23,160	-	\$24,060	-	-	-	-	\$75,770	-	\$40,850

**Shad**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (Summer Shad Gill Netting) (geometric means)										
Alewife CPUE	0.4	0.4	0.4	1.5	2.8	-	-	-	1.0	-
Gizzard CPUE	3.3	3.3	1.7	4.1	5.5	-	-	-	2.5	-
Threadfin CPUE	3.0	2.0	4.7	2.3	3.1	-	-	-	1.4	-

**Habitat Enhancement**

Type of Work	Details	Quantity	
		New	Renovated
Christmas trees		41 units	233 units

**Water Quality Monitoring**

Parameter	Sampling Period	Water Quality
Temperature	July - August	Normal
Dissolved Oxygen	July - August	Normal
PH	July - August	Normal
Conductivity	July - August	Normal

## Douglas Reservoir

### Description

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<b>Surface Area:</b> 30,400 acres	<b>Shoreline Distance:</b> 127 miles
<b>Counties:</b> Jefferson, Sevier, Cocke	<b>Drainage Area:</b> 4541 square miles
<b>Full Pool Elevation:</b> 994 feet above mean sea level	<b>Mean Annual Fluctuation:</b> 50 feet
<b>Maximum Depth:</b> 129 feet	<b>Thermocline Depth:</b> 23 feet
<b>Mean Chlorophyll (Forebay):</b> 6.8 parts per million	<b>Shoreline Development:</b> 17%
<b>Trophic Status (Forebay):</b> Mesotrophic	<b>Trophic Index, Carlson (1977):</b> 49.3
<b>Hydraulic Retention Time:</b> 105 days	<b>Reservoir Age:</b> 72 years (dam closure 1943)
<b>Total Fishing Effort:</b> 581,862 hours	<b>Total Value by Anglers:</b> \$2,332,710

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### Summary:

#### Electrofishing

The 2015 smallmouth bass catch rates were a little below average, with a CPUE of 26.3fish/hour. We saw another strong year class in 2015, in which almost half of the fish collected (38%) were 7-inches and under. Large number of smallmouth bass sampled under 7-inches, the last few years, should help smallmouth populations remain stable and fishing should continue to improve. The relative weights for smallmouth bass were normal for Douglas Reservoir.

The 2015 largemouth bass catch rates were below average, with a CPUE of 83.4 fish/hour. As is normal with Douglas, a large percentage (60%) of fish occurred in the 6 to 12-inch size range. This large number of small fish in the largemouth bass population will help to ensure a stable and quality fishery for the next several years. The relative weights for largemouth were also normal for Douglas Reservoir.

#### Trap Netting

Trap nets were used to sample Douglas Reservoir crappie populations in early November 2015. These nets were set from just above Nina Creek to Flat Creek. The TWRA collected a total of 528 black crappie, 359 white crappie, and 5 black-nose black crappie in 90 trap net sets.

About 62% of the black crappie collected were between 6 and 10 inches, which indicated that there was natural reproduction in 2014. About 27% of the black crappie collected were less than 5 inches, which indicated that there was natural reproduction of black crappie in 2015. About 93% of the white crappie collected were less than 5-inches, which indicated good natural reproduction of that species as well.

This is extremely good news, indicating successful crappie reproduction on Douglas Reservoir, the last four years. Good overall numbers of crappie collected, combined with the large numbers of young of the year crappie, indicate that the Douglas crappie population continues to show good signs of recovery.

### **Gill Netting**

Gill netting was conducted on Douglas Reservoir in 2015, 7 sauger, 81 walleye, and 41 white bass were collected in six experimental gill nets. The gill nets were set from Indian Creek to Muddy Creek.

The catch rates for sauger were below average at 1.2 fish per net night. We hope that stocking efforts combined with the current (1 fish over 16-inches) regulation, which is in place to help protect adult female sauger, will help sauger populations recover on Douglas Reservoir.

The catch rates for walleye were well above average at 13.5 fish per net night. The good news for the walleye population is that there was also a good percentage collected under 12-inches (38%). This would indicate another successful spawning year for Douglas Reservoir walleye. The number of walleye collected over the 15-inch size limit would indicate that there will be plenty of keeper size fish for anglers in 2016.

The overall number of white bass collected was about average for Douglas Reservoir. This is good news and should mean that there will be plenty of white bass for anglers to catch in 2016.

### **Shad Netting**

There was no shad netting conducted on Douglas Reservoir in 2015.

### **Habitat Enhancement**

Habitat enhancement work was conducted on Douglas Reservoir in 2015. A total of 765 Christmas trees were installed at four different locations. The trees were installed in groups of five with drive in anchors.

### **Water Quality**

Water quality sampling was conducted at two sites on Douglas Reservoir during the months of July, August, and September. These samples were normal for Douglas Reservoir.

### **Lakewide Angling Summary**

Total Effort and Expenditures										
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Angling Pressure										
Angler Hours	no survey	567,005	no survey	no survey	no survey	no survey	706,357	no survey	581,862	276,669
Angler Hours Per Acre	no survey	18.5	no survey	no survey	no survey	no survey	23.0	no survey	19.1	9.1
Angler Trips	no survey	109,325	no survey	no survey	no survey	no survey	126,943	no survey	98,479	49,233
Value of Fishery (angler expenditures creel)										
All Species	no survey	\$1,348,060	no survey	no survey	no survey	no survey	\$3,961,800	no survey	\$2,332,710	\$928,230

**Black Bass, Douglas Reservoir**

Black Bass												
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Angling Pressure (creel survey data)												
All Black Bass	(hrs)	N	204,725	N	N	N	N	379,812	N	179,745	72,219	139,417
	(hrs/acre)	O	6.7	O	O	O	O	12	O	6	2.4	7
Any Black Bass	(hrs)		116,281					460		51,624	34,939	50,826
	(hrs/acre)		3.8					0		2	1.1	2
Largemouth Bass	(hrs)	S	88,444	S	S	S	S	378,500	S	128,121	36,758	157,956
	(hrs/acre)	u	2.9	u	u	u	u	12	u	4	1.2	5
Smallmouth Bass	(hrs)	r	0	r	r	r	r	8,522	r	0	522	2,261
	(hrs/acre)	v	0.0	v	v	v	v	0	v	0	0.01	0
Spotted Bass	(hrs)	e	0	e	e	e	e	0	e	0	0	0
	(hrs/acre)	y	0.0	y	y	y	y	0	y	0	0.0	0
Tournaments (BITE program)												
# Tournaments (BITE)	9	4	3	3	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	4.8
Pounds/Angler Day (BITE)	4.89	4.29	3.73	3.49	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	4.10
Bass/Angler Day (BITE)	3.03	2.28	2.17	1.84								2.33
Value of Fishery (creel survey data - trip expenditures)												
All Black Bass			\$1,013,420					\$2,688,140		\$975,610	\$351,230	\$1,013,420
Any Black Bass	No		\$610,600	No	No	No	No	\$670	No	\$249,780	\$193,930	\$610,600
Largemouth Bass			\$402,820					\$2,627,110		\$725,830	\$157,100	\$402,820
Smallmouth Bass	Survey		\$0	Survey	Survey	Survey	Survey	\$60,360	Survey	\$0	\$200	\$0
Spotted Bass			\$0					\$0		\$0	\$0	\$0

**Largemouth Bass, Douglas Reservoir**

Largemouth Bass											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Substock CPUE	17.3	42.6	45.7	64.9	84.0	37.1	32.6	no survey	33.1	18.9	41.8
Density (electrofishing data - CPUE = # fish/hour)											
PSD	65%	44%	68%	53%	52%	69%	58%	no survey	56%	63%	59%
RSD - Preferred	18%	10%	13%	12%	16%	18%	26%	no survey	23%	28%	18%
CPUE	121.3	132.3	153.7	185.7	244.9	198.6	134.6	no survey	126.6	83.4	153.4
CPUE ≥ Stock	104.1	89.7	108.0	120.9	160.9	161.4	102.0	no survey	93.4	64.6	111.7
CPUE ≥ MSL	N o M i n i m u m S i z e L i m i t										
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	85.9	92.0	87.7	90.5	87.3	87.1	85.8	no survey	81.5	83.0	86.8
Quality - Preferred	88.1	88.5	90.3	90.1	89.7	89.6	90.4	no survey	88.8	91.0	89.6
Preferred - Memorable	91.2	93.0	91.0	91.4	90.9	88.4	96.5	no survey	90.1	90.0	91.4
Memorable - Trophy	100.7	98.8	102.4	103.2	111.0	97.1	none	no survey	98.5	92.0	100.5
Trophy	none	none	none	none	none	none	none	no survey	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	No	1.20	No	No	No	No	0.86	No	0.58	0.38	0.76
Harvest Rate		0.04					0.25		0.11	0.00	0.10
Percent Harvested	Survey	6.1%	Survey	Survey	Survey	Survey	28.7%	Survey	19.5%	0.0%	13.6%
Mean Weight (pounds)		1.45					2.25		2.91	N/A	2.20

**Smallmouth Bass, Douglas Reservoir**

<b>Smallmouth Bass</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.8	N/A	N/A	N/A
Substock CPUE	0.0	0.0	0.0	0.0	1.4	5.1	5.2	2.1	0.6	4.7	1.9
<b>*Density</b> (electrofishing data - CPUE = # fish/hour)											
PSD	61%	29%	46%	66%	47%	31%	31%	80%	59%	59%	51%
RSD - Preferred	36%	9%	30%	34%	19%	13%	16%	55%	33%	38%	28%
CPUE	17.1	19.8	44.9	18.7	66.4	41.6	51.8	37.4	29.3	26.3	35.3
CPUE ≥ Stock	17.1	19.8	44.9	18.7	65.1	36.4	46.5	22.6	28.6	21.5	32.1
CPUE ≥ MSL (20")	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.0	0.5	0.2
<b>Growth</b> (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	134	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	332	N/A	N/A	N/A
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	81.1	82.8	86.9	87.6	81.4	78.1	80.6	83.8	80.3	82.3	82.5
Quality - Preferred	84.0	80.9	86.1	83.3	84.1	76.5	79.9	85.3	80.4	80.1	82.1
Preferred - Memorable	89.6	79.8	87.0	88.4	82.3	69.1	84.1	87.0	82.3	85.9	83.6
Memorable - Trophy	91.7	71.0	87.1	88.0	82.6	75.8	78.3	88.3	80.5	88.5	83.2
Trophy	none	none	none	none	none	none	none	none	none	none	none
<b>Mortality</b> (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	49%	N/A	N/A	N/A
<b>Stocking</b>											
# per Acre	0.1	0.0	0.0	0.3	0.0	0.0	0.1	0.3	0.3	0.2	0.1
<b>Fishing Success</b> (creel survey data)											
Catch Rate	No	0.05	No	No	No	No	0.00	No	0.03	0.05	0.03
Harvest Rate		0.00					0.01		0.00	0.00	0.00
Percent Harvested	Survey	0.0%	Survey	Survey	Survey	Survey	36.0%	Survey	8.1%	0.0%	11.0%
Mean Weight (pounds)		N/A					3.16		3.00	N/A	3.08

\* 2004 - present data was collected from targetted smallmouth bass sample. Previous data was collected from standardized springtime electrofishing samples.



**White Crappie, Douglas Reservoir**

<b>White Crappie</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (trap net data) - CPUE = # fish/ net night											
Age-0 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.1	0.0	0.0	0.0	0.4	1.3	0.0	0.1	10.3	3.6	1.6
<b>Density</b> (trap net data) - CPUE = # fish/ net night											
PSD	100%	100%	100%	100%	9%	35%	65%	93%	89%	91%	78%
RSD - Preferred	75%	40%	67%	100%	0%	23%	40%	80%	81%	55%	56%
CPUE	0.2	0.2	0.0	0.0	0.6	1.5	0.3	0.4	10.7	4.0	1.8
CPUE ≥ Stock	0.1	0.2	0.0	0.0	0.1	0.3	0.2	0.3	0.4	0.3	0.2
CPUE ≥ MSL (10")	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.1	0.1
<b>Growth</b> (trap net data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Relative Weight</b> (trap net data)											
Stock - Quality	none	none	none	none	88.0	83.6	84.7	83.1	115.0	108.2	93.8
Quality - Preferred	105.7	97.4	97.8	none	100.0	99.9	100.7	104.7	105.8	100.5	101.4
Preferred - Memorable	99.3	101.3	92.4	none	none	103.4	97.1	100.1	95.9	91.6	97.6
Memorable - Trophy	93.7	112.8	none	51.3	none	83.1	none	97.8	91.5	91.7	88.8
Trophy	none	none	none	none	none	none	none	none	none	none	none
<b>Mortality</b> (trap net data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Stocking</b>											
# per Acre	0.0	0.5	1.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.2
<b>Angling Pressure</b> (creel survey data - any crappie)											
Angler Hours		227,504					152,524		268,444	116,903	191,344
Angler Hours/Acre		7.5					5.0		8.8	3.8	6.3
<b>Fishing Success</b> (creel survey data)											
Catch Rate	No	1.57	No	No	No	No	2.58	No	2.36	1.08	1.90
Harvest Rate		0.67					0.68		1.43	0.79	0.89
Percent Harvested		39.9%					30.6%		61.8%	64.8%	49.3%
Mean Weight (pounds)	Survey	0.64	Survey	Survey	Survey	Survey	0.48	Survey	0.55	0.55	0.56
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Any Crappie		\$229,760					\$407,204		\$655,830	\$285,560	\$394,589

**Black Crappie, Douglas Reservoir**

<b>Black Crappie</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (trap net data) - CPUE = # fish/ net night											
Age-0 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.4	0.1	0.1	0.1	0.9	1.9	0.0	3.3	2.1	1.5	1.0
<b>Density</b> (trap net data) - CPUE = # fish/ net night											
PSD	98%	100%	82%	86%	77%	65%	91%	92%	80%	84%	86%
RSD - Preferred	66%	63%	58%	31%	41%	29%	32%	61%	46%	60%	49%
CPUE	3.6	2.1	1.3	3.4	3.4	7.8	3.9	7.0	5.4	5.9	4.4
CPUE ≥ Stock	3.2	2.0	1.2	3.3	2.5	6.0	3.9	3.7	3.4	4.4	3.4
CPUE ≥ MSL (10")	1.8	1.1	0.6	0.7	0.9	1.4	0.8	1.8	1.2	2.0	1.2
<b>Growth</b> (trap net data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Relative Weight</b> (trap net data)											
Stock - Quality	113.1	none	105.8	110.2	87.9	81.6	93.9	101.9	90.1	81.6	96.2
Quality - Preferred	106.2	107.2	98.7	105.4	103.4	94.5	94.7	97.0	103.6	93.4	100.4
Preferred - Memorable	100.7	101.2	97.7	98.3	96.7	96.5	91.4	94.8	95.2	96.8	96.9
Memorable - Trophy	90.1	95.1	93.6	95.2	102.6	93.9	89.3	83.7	91.3	92.5	92.7
Trophy	none	none	none	none	none	none	none	none	none	none	none
<b>Mortality</b> (trap net data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Stocking</b>											
# per Acre	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.5
<b>Angling Pressure</b> (creel survey data - any crappie)											
Angler Hours		227,504					152,524		268,444	116,903	191,344
Angler Hours/Acre		7.5					5.0		8.8	3.8	6.3
<b>Fishing Success</b> (creel survey data)											
Catch Rate		0.31	No	No	No	No	0.18	No	0.15	0.05	0.17
Harvest Rate		0.18					0.07		0.11	0.05	0.10
Percent Harvested		55.7%					47.1%		76.3%	86.9%	66.5%
Mean Weight (pounds)	Survey	0.81	Survey	Survey	Survey	Survey	0.49	Survey	0.62	0.44	0.59
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Any Crappie		\$229,760					\$407,204		\$655,830	\$285,560	\$394,589

**Sauger, Douglas Reservoir**

<b>Sauger</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (winter gill net data)											
Substock CPUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Density</b> (winter gill net data - CPUE = # fish/net night)											
PSD	74%	100%	65%	85%	100%	91%	91%	70%	96%	100%	87%
RSD - Preferred	37%	37%	36%	70%	79%	27%	29%	70%	74%	86%	55%
CPUE	11.3	5.8	9.4	4.7	1.7	1.8	5.7	3.8	3.8	1.2	4.9
CPUE ≥ Stock	11.3	5.8	9.4	4.7	1.7	1.8	5.7	3.8	3.8	1.2	4.9
CPUE ≥ MSL (16")*	N/A	N/A	2.1	2.7	0.5	0.2	0.5	2.0	1.3	0.2	1.2
<b>Growth</b> (winter gill net data)											
Mean TL at Age-1 (mm)	342	360	370	386	392	n/a	343	406	390	381	374
Mean TL at Age-3 (mm)	409	367	448	520	none	n/a	397	397	433	none	424
<b>Relative Weight</b> (winter gill net data)											
Stock - Quality	88.7	none	91.8	92.2	none	88.3	81.9	82.6	93.5	none	88.4
Quality - Preferred	90.9	95.1	99.0	93.6	94.2	95.5	89.3	none	94.0	89.6	93.5
Preferred - Memorable	96.2	92.8	95.5	96.4	96.5	100.9	95.4	96.9	97.5	94.3	96.2
Memorable - Trophy	none	none	96.3	100.8	none	none	none	none	none	none	98.5
Trophy	none	none	none	none	none	none	none	none	none	none	
<b>Mortality</b> (winter gill net data)											
Total Mortality	N/A	N/A	N/A	52.00%	N/A	N/A	N/A	N/A	N/A	N/A	52.00%
<b>Stocking</b>											
# per Acre	0.9	2.2	2.0	1.8	0.0	6.4	0.0	3.0	0.0	0.7	1.7
<b>Angling Pressure</b> (creel survey data - sauger data only)											
Angler Hours		15,001					1,529		2,375	2,500	5,351
Angler Hours/Acre	No	0.49	No	No	No	No	0.05	No	0.07	0.08	0.18
<b>Fishing Success</b> (creel survey data - sauger data only)											
Percent Harvested		21.3%					62.8%		81.0%	63.4%	57.1%
Mean Weight (pounds)		1.27					1.46		1.59	1.67	1.50
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
All Sanders	Survey	\$33,040	Survey	Survey	Survey	Survey	\$245,310	Survey	\$166,090	\$80,100	\$131,135
Sauger Data Only		\$28,030					\$21,520		\$8,840	\$6,950	\$16,335

**Walleye, Douglas Reservoir**

<b>Walleye</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (winter gill net data)											
Substock CPUE	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.1
<b>Density</b> (winter gill net data - CPUE = # fish/net night)											
PSD	27%	86%	57%	22%	35%	79%	33%	52%	54%	48%	49%
RSD - Preferred	9%	4%	11%	0%	1%	0%	5%	4%	0%	6%	4%
CPUE	6.4	4.7	4.0	4.6	16.2	2.5	9.5	4.2	6.5	13.5	7.2
CPUE ≥ Stock	6.3	4.7	4.0	4.6	16.2	2.3	9.5	4.2	6.5	13.3	7.1
CPUE ≥ MSL (15")	1.7	4.4	2.3	1.0	5.2	1.7	3.0	2.2	3.0	5.2	3.0
<b>Growth</b> (winter gill net data)											
Mean TL at Age-1 (mm)		402	N/A	429	414	409	404	403	407	407	409
Mean TL at Age-3 (mm)		458	450	N/A	none	none	537	480	427	600	492
<b>Relative Weight</b> (winter gill net data)											
Stock - Quality	91.2	87.1	91.7	88.3	88.8	89.8	86.6	85.0	94.1	87.4	89.0
Quality - Preferred	87.3	84.2	88.4	87.8	86.8	88.3	87.0	89.5	91.2	88.2	87.9
Preferred - Memorable	93.7	80.6	94.3	none	92.8	none	88.0	80.7	none	90.1	88.6
Memorable - Trophy	none	none	97.2	none	none	none	none	none	none	none	97.2
Trophy	none	none	none	none	none	none	none	none	none	none	none
<b>Mortality</b> (winter gill net data)											
Total Mortality	N/A	N/A	N/A	80.00%	N/A	N/A	N/A	N/A	N/A	N/A	80.00%
<b>Stocking</b>											
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Angling Pressure</b> (creel survey data - walleye data only)											
Angler Hours		5,178					63,435		43,028	24,509	34,038
Angler Hours/Acre	No	0.17	No	No	No	No	2.08	No	1.41	0.80	1.12
<b>Fishing Success</b> (creel survey data - walleye data)											
Percent Harvested		21.6%					76.3%		74.7%	55.3%	57.0%
Mean Weight (pounds)		1.89					1.88		1.79	1.86	1.86
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
All Sanders	Survey	\$33,040	Survey	Survey	Survey	Survey	\$245,310	Survey	\$166,090	\$80,100	\$131,135
Walleye Data Only		\$5,010					\$223,790		\$157,270	\$73,150	\$114,805

**Sunfish, Douglas Reservoir**

<b>Sunfish</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Angling Pressure</b> (creel survey data - any sunfish)											
Angler Hours	N	31,338	N	N	N	N	73,120	N	4,976	1,986	27,855
Angler Hours/Acre	^	1.03	^	o	o	o	2.40	o	0.16	0.06	0.92
<b>Fishing Success</b> (creel survey data - bluegill only)											
Catch Rate (bluegill)	S	5.23	S	S	S	S	2.42	S	0.00	7.30	3.74
Harvest Rate (bluegill)	u	3.32	u	u	u	u	1.18	u	0.00	4.29	2.20
% Harvested (bluegill)	r	55.5%	r	r	r	r	38.6%	r	75.0%	51.5%	55.2%
Mean Weight (bluegill)	v	0.28	v	v	v	v	0.28	v	0.07	0.22	0.21
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Any Sunfish	y	\$12,640	y	y	y	y	\$73,120	y	\$5,690	\$8,590	\$25,010

**Catfish, Douglas Reservoir**

<b>Catfish</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Angling Pressure</b> (creel survey data - any catfish)											
Angler Hours	N	46,155	N	N	N	N	24,540	N	3,835	9,372	20,976
Angler Hours/Acre	-	1.52	o	o	o	o	0.80	o	0.80	0.30	0.69
<b>Fishing Success</b> (creel survey data)											
Catch Rate (channel cat)	S	0.93	S	S	S	S	0.34	S	0.00	0.26	0.38
Harvest Rate (channel cat)	u	0.61	u	u	u	u	0.21	u	0.00	0.11	0.23
% Harvested (channel cat)	r	62.5%	r	r	r	r	80.6%	r	27.0%	26.9%	49.3%
Mean Weight (channel cat)	v	1.66	v	v	v	v	3.37	v	1.61	2.3	2.24
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Any Catfish	y	\$23,200	y	y	y	y	\$44,710	y	\$101,500	\$41,970	\$52,845

**Shad, Douglas Reservoir**

<b>Shad</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Density</b> (summer shad gill net data - geometric mean density)											
Gizzard Shad	No	19.5056	19.51	7.73984	No	No	No	No	No	No	15.59
Threadfin Shad	Survey	91.4348	42.75	10.72	Survey	Survey	Survey	Survey	Survey	Survey	48.30
Alewife		0	0.00	0							0.00

**Habitat Enhancement, Douglas Reservoir**

Type of Work	Details	Quantity	
		New	Renovated
Planted			
Rebrushed			
Checked and Refurbishe	stake beds		
Rebrushed			2 Sites, 230 trees
Added			
Installed		2 sites, 535 trees	

**Water Quality Monitoring, Douglas Reservoir**

Parameter	Sampling Period	Water Quality
Temperature	July to September	normal
Dissolved Oxyged	July to September	normal

## Fort Loudoun Reservoir

### Description

**Area:** 14,600 acres

**Shoreline:** 379 miles

**Counties:** Knox, Loudon, Blount

**Full Pool Elevation (feet-msl):** ~813

**Winter Pool Elevation (feet-msl):** ~807

**Dam Completion:** 1943

### Summary:

### Lakewide Angling Summary

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	-	-	197,702	220,585	-	-	152,819	-	-	148,482
Angler Hours Per Acre	-	-	13.5	15.1	-	-	10.5	-	-	10.3
Angler Trips	-	-	43,406	49,304	-	-	31,611	-	-	33,189
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	-	-	\$806,600	\$823,930	-	-	\$559,990	-	-	\$605,250

### Black Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	-	-	95,230	93,323	-	-	65,110	-	-	71,400
All Black Bass (hrs/acre)	-	-	6.52	6.39	-	-	4.46	-	-	4.89
Any Black Bass (hrs)	-	-	94,694	78,936	-	-	457	-	-	26,275
Any Black Bass (hrs/acre)	-	-	6.49	5.41	-	-	0.03	-	-	1.80
Largemouth Bass (hrs)	-	-	0	13,677	-	-	63,284	-	-	42,507
Largemouth Bass (hrs/acre)	-	-	0.00	0.94	-	-	4.33	-	-	2.91
Smallmouth Bass (hrs)	-	-	536	710	-	-	1,369	-	-	2,618
Smallmouth Bass (hrs/acre)	-	-	0.04	0.05	-	-	0.09	-	-	0.18
Spotted Bass (hrs)	-	-	0	0	-	-	0	-	-	0
Spotted Bass (hrs/acre)	-	-	0.00	0.00	-	-	0.00	-	-	0.00
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	-	-	\$490,470	\$397,170	-	-	\$313,430	-	-	\$361,060
Any Black Bass	-	-	\$487,630	\$386,360	-	-	\$1,990	-	-	\$141,640
Largemouth Bass	-	-	\$0	\$6,890	-	-	\$306,800	-	-	\$208,920
Smallmouth Bass	-	-	\$2,840	\$3,920	-	-	\$4,640	-	-	\$10,500
Spotted Bass	-	-	\$0	\$0	-	-	\$0	-	-	\$0

**Largemouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										target
Substock CPUE	2.00	16.67	22.00	15.20	4.33	-	-	3.60	0.40	-
<b>Density</b> (electrofishing)										
PSD	60	71	51	64	72	-	-	65	79	-
RSD (preferred)	18	19	16	16	23	-	-	29	44	-
CPUE (total)	66.3	97.0	162.0	104.0	92.7	-	-	44.8	43.6	-
CPUE $\geq$ Stock	64.3	80.3	140.0	88.8	88.4	-	-	41.2	43.2	-
CPUE $\geq$ MLL (14-inches)	17.0	23.7	36.0	24.8	28.0	-	-	16.8	22.8	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	7.4
Length Age-3	-	-	-	-	-	-	-	-	-	13.3
<b>Condition</b> (spring electrofishing)										
Stock	85.5	86.3	95.1	91.3	84.6	-	-	87.2	80.7	90.3
Quality	87.3	89.5	94.3	91.9	85.8	-	-	90.2	85.0	97.2
Preferred	89.6	91.7	96.2	99.6	94.7	-	-	92.4	94.2	102.3
Memorable	93.4	103.1	98.4	-	102.8	-	-	91.9	95.3	103.3
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	37.0%
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	0.46	-	-	1.10	-	-	1.26
Harvest Rate (intended)	-	-	-	0.09	-	-	0.02	-	-	0.00
% Released	-	-	96.5%	97.4%	-	-	98.3%	-	-	99.7%
Mean Weight	-	-	2.44	2.89	-	-	3.31	-	-	3.65



**Smallmouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										target
Substock CPUE	3.00	10.00	6.00	0.80	0.33	-	-	0.00	0.00	-
<b>Density</b> (electrofishing)										
PSD	30	38	48	64	71	-	-	20	40	-
RSD (preferred)	19	13	26	36	29	-	-	-	20	-
CPUE (preferred)	1.0	1.0	1.3	1.6	1.3	-	-	0.0	0.4	-
CPUE (memorable)	1.3	0.0	0.7	0.8	1.0	-	-	0.0	0.4	-
CPUE (trophy)	0.0	0.0	0.3	0.0	0.0	-	-	0.0	0.0	-
CPUE (total)	15.3	18.0	15.0	5.2	8.3	-	-	4.0	2.0	-
CPUE ≥ Stock	12.3	8.0	9.0	4.4	8.0	-	-	4.0	2.0	-
CPUE ≥ Preferred	2.3	1.0	2.3	2.4	2.3	-	-	0.0	0.8	-
CPUE ≥ MLL (18-inches)	0.0	0.0	0.7	0.8	0.0	-	-	0.0	0.4	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	6.2
Length Age-3	-	-	-	-	-	-	-	-	-	12.9
<b>Condition</b> (spring electrofishing)										
Stock	80.4	85.1	83.6	81.5	77.6	-	-	78.9	73.2	83.5
Quality	90.4	81.5	90.5	85.2	73.8	-	-	69.5	70.5	80.8
Preferred	73.6	79.6	73.4	83.6	78.1	-	-	-	79.5	79.9
Memorable	78.5	-	80.6	80.0	82.1	-	-	-	-	83.5
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	28.0%
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	0.25	0.77	-	-	1.33	-	-	0.56
Harvest Rate (intended)	-	-	0.00	0.15	-	-	0.00	-	-	0.00
% Released	-	-	99.4%	97.9%	-	-	100.0%	-	-	99.8%
Mean Weight	-	-	3.75	3.16	-	-	-	-	-	3.75

**Black Crappie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (electrofishing)										
PSD	91	100	99	100	100	-	-	100	90	-
RSD (preferred)	45	36	65	38	72	-	-	38	19	-
CPUE (total)	3.7	9.3	23.0	10.4	6.0	-	-	5.2	12.4	-
CPUE $\geq$ Stock	3.7	9.3	23.0	10.4	6.0	-	-	5.2	12.4	-
CPUE $\geq$ MLL (10-inches)	1.7	3.3	15.0	4.0	3.7	-	-	2.0	2.0	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	84.2	-	96.9	-	-	-	-	-	83.2	-
Quality	84.4	92.8	101.1	94.0	89.1	-	-	83.2	83.9	-
Preferred	81.8	92.5	95.9	91.4	91.0	-	-	90.1	75.0	-
Memorable	-	87.7	91.7	85.8	-	-	-	89.9	75.8	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	-	-	53,849	62,013	-	-	43,767	-	-	35,126
Angler Hours/Acre	-	-	3.7	4.2	-	-	3.0	-	-	2.4
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	-	-	1.42	1.74	-	-	2.15	-	-	2.09
Harvest Rate (any crappie)	-	-	0.61	0.75	-	-	0.94	-	-	1.00
% Released (black crappie)	-	-	40.5%	23.4%	-	-	56.6%	-	-	53.5%
Mean Weight (black crappie)	-	-	1.13	1.19	-	-	1.35	-	-	1.08
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	-	-	\$164,360	\$198,060	-	-	\$153,130	-	-	\$109,490

**White Crappie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (electrofishing)										
PSD	100	100	100	100	96	-	-	94	91	-
RSD (preferred)	77	86	90	70	97	-	-	38	35	-
CPUE (total)	13.0	11.7	20.7	12.4	9.3	-	-	26.0	21.6	-
CPUE $\geq$ Stock	13.0	11.7	20.7	12.0	9.3	-	-	26.0	21.6	-
CPUE $\geq$ MLL (10-inches)	10.0	10.0	18.7	8.4	8.0	-	-	7.6	6.4	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	81.7	90.0	-
Quality	88.7	90.3	98.7	103.8	89.9	-	-	89.8	86.7	-
Preferred	90.6	90.8	98.0	92.1	95.6	-	-	88.1	89.5	-
Memorable	88.5	87.9	97.3	88.0	91.5	-	-	89.6	83.3	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	-	-	53,849	62,013	-	-	43,767	-	-	35,126
Angler Hours/Acre	-	-	3.7	4.2	-	-	3.0	-	-	2.4
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	-	-	1.42	1.74	-	-	2.15	-	-	2.09
Harvest Rate (any crappie)	-	-	0.61	0.75	-	-	0.94	-	-	1.00
% Released (white crappie)	-	-	63.4%	61.1%	-	-	60.2%	-	-	59.7%
Mean Weight (white crappie)	-	-	0.90	0.97	-	-	1.18	-	-	0.80
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	-	-	\$164,360	\$198,060	-	-	\$153,130	-	-	\$109,490

**Sunfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all sunfish)	-	-	5,052	6,114	-	-	7,124	-	-	2,161
Angler Hours/Acre	-	-	0.3	0.4	-	-	0.5	-	-	0.1
<b>Fishing Success</b> (creel)										
Catch Rate (any sunfish)	-	-	1.66	2.50	-	-	2.38	-	-	7.06
Harvest Rate (any sunfish)	-	-	0.42	1.40	-	-	0.84	-	-	3.83
% Released (bluegill)	-	-	83.0%	71.5%	-	-	69.9%	-	-	73.5%
Mean Weight (bluegill)	-	-	0.67	0.58	-	-	0.67	-	-	0.45
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Sunfish	-	-	\$14,020	\$15,800	-	-	\$15,260	-	-	\$5,350

**Catfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all catfish)	-	-	9,449	14,431	-	-	6,268	-	-	6,201
Angler Hours/Acre	-	-	0.6	1.0	-	-	0.4	-	-	0.4
<b>Fishing Success</b> (creel)										
Catch Rate (any catfish)	-	-	0.43	0.70	-	-	0.27	-	-	0.00
Harvest Rate (any catfish)	-	-	0.09	0.25	-	-	0.15	-	-	0.00
% Released (channel)	-	-	100.0%	68.3%	-	-	43.3%	-	-	45.5%
Mean Weight (channel)	-	-	-	5.08	-	-	4.15	-	-	4.01
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Catfish	-	-	\$38,700	\$45,800	-	-	\$15,530	-	-	\$28,670

**Habitat Enhancement**

Type of Work	Details	Quantity	
		New	Renovated
Rebrush	Christmas trees with block	none	none

## Melton Hill Reservoir

### Description

**Area:** 5,690 acres

**Shoreline:** 170 miles

**Counties:** Anderson, Knox, Loudon, Roane

**Full Pool Elevation (feet-msl):** ~795

**Winter Pool Elevation (feet-msl):** ~792

**Dam Completion:** 1963

**Summary:** No data was collected on Melton Hill this year.

### Lakewide Angling Summary

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	111,098	74,185	87,914	103,258	77,098	60,624	60,995	-	-	-
Angler Hours Per Acre	19.5	13.0	15.5	18.1	13.5	10.7	10.7	-	-	-
Angler Trips	28,079	19,039	22,458	24,464	20,008	14,873	12,717	-	-	-
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	\$369,400	\$258,360	\$382,190	\$379,910	\$342,040	\$288,600	\$217,540	-	-	-

### Black Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	-	23,804	36,214	36,902	28,638	27,074	26,067	-	-	-
All Black Bass (hrs/acre)	-	4.18	6.36	6.49	5.03	4.76	4.58	-	-	-
Any Black Bass (hrs)	-	23,804	36,214	36,280	1,504	0	346	-	-	-
Any Black Bass (hrs/acre)	-	4.18	6.36	6.38	0.26	0.00	0.06	-	-	-
Largemouth Bass (hrs)	-	0	0	200	26,368	26,871	25,721	-	-	-
Largemouth Bass (hrs/acre)	-	0.00	0.00	0.04	4.63	4.72	4.52	-	-	-
Smallmouth Bass (hrs)	-	0	0	422	621	203	0	-	-	-
Smallmouth Bass (hrs/acre)	-	0.00	0.00	0.07	0.11	0.04	0.00	-	-	-
Spotted Bass (hrs)	-	0	0	0	145	0	0	-	-	-
Spotted Bass (hrs/acre)	-	0.00	0.00	0.00	0.03	0.00	0.00	-	-	-
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	-	\$110,260	\$196,560	\$175,440	\$143,820	\$164,200	\$122,280	-	-	-
Any Black Bass	-	\$110,260	\$196,560	\$174,010	\$8,160	\$0	\$1,130	-	-	-
Largemouth Bass	-	\$0	\$0	\$910	\$133,520	\$163,330	\$121,150	-	-	-
Smallmouth Bass	-	\$0	\$0	\$520	\$1,800	\$870	\$0	-	-	-
Spotted Bass	-	\$0	\$0	\$0	\$340	\$0	\$0	-	-	-

**Largemouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	40.70	11.30	9.30	11.67	19.33	-	-	-	-	-
<b>Density</b> (electrofishing)										
PSD	32	40	58	71	66	-	-	-	-	-
RSD (preferred)	9	10	8	16	22	-	-	-	-	-
CPUE (total)	123.3	98.3	153.3	86.0	99.7	-	-	-	-	-
CPUE ≥ Stock	82.6	87.0	144.0	74.3	80.3	-	-	-	-	-
CPUE ≥ MLL (14-inches)	11.7	11.0	22.3	20.7	29.6	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	5.6	-	-	-	-	-	-	-	-
Length Age-3	-	9.5	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	87.4	85.0	86.0	80.2	79.2	-	-	-	-	-
Quality	87.0	87.1	86.3	80.7	80.1	-	-	-	-	-
Preferred	87.9	87.3	89.3	86.7	84.2	-	-	-	-	-
Memorable	77.7	83.9	-	93.8	84.3	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	47.0%	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	0.42	0.59	0.97	1.09	-	-	-
Harvest Rate (intended)	-	-	-	0.00	0.01	0.04	0.04	-	-	-
% Released	-	99.4%	95.0%	97.3%	98.6%	95.3%	96.6%	-	-	-
Mean Weight	-	2.76	2.29	2.36	2.39	2.33	2.91	-	-	-

**Smallmouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	2.00	1.00	0.30	0.33	1.67	-	-	-	-	-
<b>Density</b> (electrofishing)										
PSD	63	45	77	79	43	-	-	-	-	-
RSD (preferred)	11	10	36	36	24	-	-	-	-	-
CPUE (preferred)	3.3	2.3	3.0	1.7	1.3	-	-	-	-	-
CPUE (memorable)	0.0	0.0	0.3	0.0	0.3	-	-	-	-	-
CPUE (trophy)	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
CPUE (total)	8.3	7.7	7.7	5.0	8.7	-	-	-	-	-
CPUE $\geq$ Stock	6.3	6.7	7.4	4.7	7.0	-	-	-	-	-
CPUE $\geq$ Preferred	3.3	2.3	3.3	1.7	1.6	-	-	-	-	-
CPUE $\geq$ MLL (18-inches)	0.0	0.0	0.0	0.0	0.3	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	82.4	86.5	82.4	84.1	78.1	-	-	-	-	-
Quality	81.7	81.8	78.5	78.5	74.3	-	-	-	-	-
Preferred	80.5	79.5	76.6	75.6	74.3	-	-	-	-	-
Memorable	-	-	79.4	-	79.2	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	0.17	0.12	0.36	0.00	-	-	-
Harvest Rate (intended)	-	-	-	0.00	0.00	0.00	0.00	-	-	-
% Released	-	100.0%	100.0%	99.0%	100.0%	98.5%	88.8%	-	-	-
Mean Weight	-	-	-	4.13	-	3.50	3.73	-	-	-

**Spotted Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	0.00	0.70	0.00	0.00	0.33	-	-	-	-	-
<b>Density</b> (electrofishing)										
PSD	100	-	33	33	29	-	-	-	-	-
RSD (preferred)	-	-	17	-	6	-	-	-	-	-
CPUE (total)	0.3	2.0	2.0	1.0	6.0	-	-	-	-	-
CPUE $\geq$ Stock	0.3	1.3	2.0	1.0	5.7	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	-	96.6	85.4	94.1	83.5	-	-	-	-	-
Quality	101.2	-	94.0	78.0	75.1	-	-	-	-	-
Preferred	-	-	88.1	-	84.9	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	-	-	-	-	-	-	-
Harvest Rate (intended)	-	-	-	-	-	-	-	-	-	-
% Released	-	100.0%	100.0%	-	100.0%	-	-	-	-	-
Mean Weight	-	-	-	-	-	-	-	-	-	-



**Black Crappie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (electrofishing)										
PSD	80	100	100	-	100	-	-	-	-	-
RSD (preferred)	5	90	86	-	100	-	-	-	-	-
CPUE (total)	6.7	3.3	2.3	-	0.7	-	-	-	-	-
CPUE $\geq$ Stock	6.7	3.3	2.3	-	0.7	-	-	-	-	-
CPUE $\geq$ MLL (10-inches)	0.3	3.0	2.0	-	0.7	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	87.6	-	-	-	-	-	-	-	-	-
Quality	90.0	78.1	94.7	-	-	-	-	-	-	-
Preferred	-	86.5	91.6	-	87.1	-	-	-	-	-
Memorable	74.2	79.4	81.1	-	-	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	-	14,995	14,091	13,011	7,916	3,791	4,149	-	-	-
Angler Hours/Acre	-	2.6	2.5	2.3	1.4	0.7	0.7	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	-	0.95	0.73	0.96	0.94	0.86	0.64	-	-	-
Harvest Rate (any crappie)	-	0.24	0.28	0.28	0.31	0.50	0.37	-	-	-
% Released (black crappie)	-	79.2%	13.3%	-	60.5%	-	-	-	-	-
Mean Weight (black crappie)	-	0.86	1.13	-	1.35	-	-	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	-	\$53,160	\$47,290	\$49,870	\$31,870	\$19,690	\$12,180	-	-	-

**White Crappie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (electrofishing)										
PSD	96	97	100	100	100	-	-	-	-	-
RSD (preferred)	62	51	81	69	92	-	-	-	-	-
CPUE (total)	24.7	22.7	19.0	8.7	4.3	-	-	-	-	-
CPUE $\geq$ Stock	24.7	22.7	19.0	8.7	4.3	-	-	-	-	-
CPUE $\geq$ MLL (10-inches)	14.7	11.0	14.7	6.0	4.0	-	-	-	-	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	91.9	85.3	-	-	-	-	-	-	-	-
Quality	92.8	86.6	94.7	91.5	81.6	-	-	-	-	-
Preferred	85.9	83.8	92.2	84.5	87.1	-	-	-	-	-
Memorable	85.9	83.6	89.0	84.0	82.0	-	-	-	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	-	14,995	14,091	13,011	7,916	3,791	4,149	-	-	-
Angler Hours/Acre	-	2.6	2.5	2.3	1.4	0.7	0.7	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	-	0.95	0.73	0.96	0.94	0.86	0.64	-	-	-
Harvest Rate (any crappie)	-	0.24	0.28	0.28	0.31	0.50	0.37	-	-	-
% Released (w hite crappie)	-	81.3%	70.4%	75.4%	75.1%	44.8%	35.9%	-	-	-
Mean Weight (w hite crappie)	-	0.75	0.83	0.96	1.05	1.00	1.28	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	-	\$53,160	\$47,290	\$49,870	\$31,870	\$19,690	\$12,180	-	-	-

**Muskie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Stocking</b>										
#	6,169	3,162	1,520	2,629	4,510	5,486	5,342	4,565	2,973	5,007
#/Acre	1.1	0.6	0.3	0.5	0.8	1.0	0.9	0.8	0.5	0.9
<b>Angling Pressure</b> (creel)										
Angler Hours	-	3,802	2,175	5,585	6,999	4,790	4,789	-	-	-
Angler Hours/Acre	-	0.7	0.4	1.0	1.2	0.8	0.8	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	0.02	0.03	0.03	0.07	0.04	0.02	-	-	-
Harvest Rate (intended)	-	0.00	0.00	0.00	0.01	0.00	0.00	-	-	-
% Released	-	100.0%	100.0%	100.0%	95.0%	100.0%	100.0%	-	-	-
Mean Weight	-	-	-	-	-	-	-	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Musky	-	\$16,960	\$16,530	\$42,580	\$50,260	\$30,210	\$20,960	-	-	-

**Striped Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours	-	4,159	6,545	4,537	5,243	5,330	3,182	-	-	-
Angler Hours/Acre	-	0.7	1.2	0.8	0.9	0.9	0.6	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	0.10	0.06	0.06	0.10	0.07	0.08	-	-	-
Harvest Rate (intended)	-	0.03	0.00	0.00	0.02	0.01	0.00	-	-	-
% Released	-	97.4%	100.0%	100.0%	91.2%	94.1%	100.0%	-	-	-
Mean Weight	-	38.80	-	-	10.24	22.40	-	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Striped Bass	-	\$13,630	\$50,480	\$18,460	\$34,030	\$29,970	\$18,070	-	-	-

**Sunfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all sunfish)	-	796	2,295	2,581	677	514	2,032	-	-	-
Angler Hours/Acre	-	0.1	0.4	0.5	0.1	0.1	0.4	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (any sunfish)	-	1.80	1.73	1.53	2.64	1.89	1.88	-	-	-
Harvest Rate (any sunfish)	-	0.00	0.64	0.75	1.39	1.81	0.82	-	-	-
% Released (bluegill)	-	95.2%	89.8%	70.1%	77.8%	7790.0%	76.0%	-	-	-
Mean Weight (bluegill)	-	0.45	0.58	0.41	0.64	0.64	0.70	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Sunfish	-	\$2,270	\$10,710	\$7,230	\$3,060	\$1,340	\$3,000	-	-	-

**Catfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all catfish)	-	1,877	1,703	2,811	4,169	542	2,484	-	-	-
Angler Hours/Acre	-	0.3	0.3	0.5	0.7	0.1	0.4	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (any catfish)	-	0.72	0.10	0.19	0.20	0.18	0.15	-	-	-
Harvest Rate (any catfish)	-	0.08	0.00	0.07	0.13	0.18	0.15	-	-	-
% Released (channel)	-	-	100.0%	89.4%	84.9%	0.0%	-	-	-	-
Mean Weight (channel)	-	-	-	-	4.10	1.90	-	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Catfish	-	\$5,550	\$4,740	\$12,500	\$17,910	\$1,840	\$4,790	-	-	-

**Habitat Enhancement**

Type of Work	Details	Quantity	
		New	Renovated
Rebrush	Christmas trees with block	none	none

## Norris Reservoir

### Description

**Area:** 34,200 acres

**Shoreline:** 809 miles

**Counties:** Union, Grainger, Claiborne, Campbell, Anderson

**Full Pool Elevation (feet-msl):** ~1020

**Winter Pool Elevation (feet-msl):** ~990

**Dam Completion:** 1936

### Summary:

#### Lakewide Angling Summary

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	318,391	334,986	346,327	308,259	291,245	-	286,759	221,108	238,886	228,567
Angler Hours Per Acre	9.3	9.8	10.1	9.0	8.5	-	8.4	6.5	7.0	6.7
Angler Trips	61,861	65,537	66,546	57,970	58,799	-	58,582	50,515	54,734	49,241
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	\$1,143,880	\$1,351,870	\$2,019,560	\$971,690	\$857,590	-	\$1,388,060	\$845,120	\$1,360,120	\$1,149,440

### Black Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	135,241	142,592	161,902	134,166	136,794	-	130,575	118,438	114,460	118,547
(hrs/acre)	3.95	4.17	4.73	3.92	4.00	-	3.82	3.46	3.35	3.47
Any Black Bass (hrs)	100,115	113,634	124,831	94,181	81,944	-	85,571	78,858	79,410	72,625
(hrs/acre)	2.93	3.32	3.65	2.75	2.40	-	2.50	2.31	2.32	2.12
Largemouth Bass (hrs)	1,351	339	2,244	2,381	9,719	-	2,574	6,182	4,665	3,178
(hrs/acre)	0.04	0.01	0.07	0.07	0.28	-	0.08	0.18	0.14	0.09
Smallmouth Bass (hrs)	33,775	28,619	32,140	36,691	44,573	-	41,945	33,398	30,385	42,744
(hrs/acre)	0.99	0.84	0.94	1.07	1.30	-	1.23	0.98	0.89	1.25
Spotted Bass (hrs)	0	0	2,687	913	558	-	485	0	0	0
(hrs/acre)	0.00	0.00	0.08	0.03	0.02	-	0.01	0.00	0.00	0.00
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	\$605,760	\$712,800	\$1,186,900	\$469,620	\$514,300	-	\$753,570	\$596,350	\$626,970	\$547,720
Any Black Bass	\$474,110	\$614,920	\$997,680	\$310,620	\$325,210	-	\$572,920	\$454,560	\$493,310	\$330,850
Largemouth Bass	\$7,800	\$3,260	\$4,090	\$10,990	\$44,350	-	\$8,630	\$23,710	\$11,520	\$16,330
Smallmouth Bass	\$123,850	\$94,620	\$183,790	\$146,010	\$144,740	-	\$172,020	\$118,080	\$122,140	\$200,540
Spotted Bass	\$0	\$0	\$1,340	\$2,000	\$0	-	\$0	\$0	\$0	\$0

**Largemouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
						SMB target		high flows		
Substock CPUE	3.07	0.67	2.53	1.47	3.14	-	3.1	0.67	4.53	3.29
<b>Density</b> (electrofishing)										
PSD	74	77	79	76	79	-	75.0	84	80	81
RSD (preferred)	37	33	30	29	44	-	35.0	39	38	40
CPUE (total)	25.2	27.7	26.9	26.4	31.4	-	35.1	19.3	32.9	37.3
CPUE $\geq$ Stock	22.1	27.0	24.4	24.9	28.3	-	32.0	18.6	28.4	34.0
CPUE $\geq$ MLL (14-inches)	10.7	13.6	11.6	11.1	15.9	-	15.6	10.8	15.3	18.4
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	84.1	83.5	84.1	82.5	86.2	-	83.1	84.0	81.0	82.5
Quality	84.0	85.9	83.1	82.3	85.6	-	85.3	82.6	80.2	80.8
Preferred	82.1	84.9	84.5	83.6	83.4	-	83.1	82.7	81.6	81.5
Memorable	82.8	86.9	87.1	93.6	80.1	-	90.0	97.1	77.3	92.7
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.32	0.29	0.10	0.00	0.38	-	0.90	0.38	0.41	0.64
Harvest Rate (intended)	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00
% Released	91.8%	93.9%	97.1%	96.9%	89.3%	-	100.0%	99.3%	99.4%	94.9%
Mean Weight	2.26	1.70	3.07	2.05	1.80	-	-	1.90	2.20	2.31

## Smallmouth Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
						SMB target		high flows		
Substock CPUE	0.53	0.27	0.53	0.00	0.57	-	1.30	0.13	3.47	2.47
<b>Density</b> (electrofishing)										
PSD	62	44	67	80	78	-	60	70	56	62
RSD (preferred)	42	19	36	52	52	-	35	29	27	34
CPUE (preferred)	0.5	0.3	2.4	1.2	3.0	-	3.2	1.7	4.1	3.5
CPUE (memorable)	0.9	0.1	0.8	0.5	1.0	-	2.7	0.3	1.5	1.2
CPUE (trophy)	0.0	0.0	0.0	0.0	0.0	-	0.0	0.1	0.1	0.0
CPUE (total)	4.0	2.4	9.3	3.3	8.3	-	18.1	7.6	24.9	16.4
CPUE ≥ Stock	3.5	2.1	8.8	3.3	7.7	-	16.8	7.5	21.4	13.9
CPUE ≥ Preferred	1.4	0.4	3.2	1.7	4.0	-	5.9	2.1	5.7	4.7
CPUE ≥ MLL (18-inches)	0.8	0.0	0.3	0.0	0.6	-	0.5	0.1	0.5	0.5
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	3.3	-	-	-	-
Length Age-3	-	-	-	-	-	11.6	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	83.6	77.5	82.1	87.6	85.0	80.0	81.6	82.4	86.6	83.7
Quality	84.7	86.0	79.5	83.1	81.2	81.4	82.3	79.1	77.6	79.0
Preferred	73.5	80.0	78.8	83.0	80.1	82.2	78.4	78.4	72.8	77.6
Memorable	73.8	73.8	71.5	81.9	76.7	82.1	75.4	76.5	71.2	73.3
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	49.0%	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.22	0.44	0.72	0.88	0.39	-	0.66	0.39	0.58	0.74
Harvest Rate (intended)	0.00	0.01	0.02	0.09	0.00	-	0.00	0.01	0.00	0.01
% Released	97.0%	95.4%	96.7%	95.8%	99.4%	-	99.1%	98.7%	100.0%	99.1%
Mean Weight	2.84	2.70	2.79	2.45	1.68	-	2.86	4.02	-	1.80

**Spotted Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
						SMB target		high flows		
Substock CPUE	3.60	3.47	2.67	0.93	2.00	-	5.20	0.80	0.67	0.71
<b>Density</b> (electrofishing)										
PSD	26	35	29	37	54	-	27	41	43	41
RSD (preferred)	6	3	2	-	9	-	2	6	3	1
CPUE (total)	20.5	18.8	31.6	10.9	25.1	-	27.7	7.6	20.4	11.5
CPUE $\geq$ Stock	16.9	15.3	28.9	10.0	23.1	-	22.5	6.8	19.7	10.8
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	91.5	92.9	92.4	91.1	93.6	-	88.9	90.8	88.3	87.6
Quality	87.5	92.0	86.6	89.6	89.0	-	86.9	86.1	82.3	82.7
Preferred	88.4	84.1	91.2	-	90.6	-	82.0	89.2	79.2	91.6
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	0.38	0.43	2.00	-	0.91	-	-	-
Harvest Rate (intended)	-	-	0.28	0.00	2.00	-	0.45	-	-	-
% Released	89.4%	94.9%	90.6%	88.0%	95.2%	-	87.0%	91.1%	98.8%	91.8%
Mean Weight	0.91	0.75	0.82	0.75	1.16	-	1.05	0.84	1.10	1.55



**Black Crappie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (trap netting)										
Substock CPUE	0.05	2.87	0.67	0.16	-	-	-	-	-	-
<b>Density</b> (trap netting)										
PSD	82	58	74	84	-	-	-	-	-	-
RSD (preferred)	29	29	32	58	-	-	-	-	-	-
CPUE (total)	1.4	5.3	1.7	1.3	-	-	-	-	-	-
CPUE ≥ Stock	1.4	2.4	1.0	1.1	-	-	-	-	-	-
CPUE ≥ MLL (10-inches)	0.4	0.7	0.3	0.6	-	-	-	-	-	-
<b>Growth</b> (trap netting)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (trap netting or ele)										
Stock	93.0	89.9	95.2	91.8	-	-	-	-	-	84.0
Quality	90.4	88.4	91.6	95.0	-	-	-	-	-	82.1
Preferred	89.7	88.1	92.7	92.4	-	-	-	-	-	78.5
Memorable	85.1	88.5	86.2	90.5	-	-	-	-	-	-
<b>Mortality</b> (trap netting)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	180,790	109,572	103,559	110,806	132,453	128,226	102,039	118,247	155,114	102,311
#/Acre	5.3	3.2	3.0	3.2	3.9	3.7	3.0	3.5	4.5	3.0
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	14,232	20,986	23,948	20,226	22,261	-	21,921	14,175	18,908	14,499
Angler Hours/Acre	0.4	0.6	0.7	0.6	0.7	-	0.6	0.4	0.6	0.4
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	1.06	0.83	0.92	0.44	0.71	-	1.02	0.35	0.43	0.81
Harvest Rate (any crappie)	0.49	0.45	0.36	0.16	0.24	-	0.51	0.28	0.31	0.57
% Released (black crappie)	35.6%	53.4%	61.5%	39.9%	72.1%	-	27.3%	23.4%	31.1%	11.3%
Mean Weight (black crappie)	0.67	0.74	0.83	0.76	0.87	-	0.95	0.85	0.64	0.89
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$29,150	\$46,790	\$69,870	\$29,200	\$43,230	-	\$52,380	\$40,290	\$36,200	\$38,920

**Striped Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting) (w alleye nets)										
Substock CPUE	0.04	0.00	0.11	0.00	0.04	0.04	0.00	0.19	0.00	0.00
<b>Density</b> (gill netting) (w alleye nets)										
PSD	30	58	59	48	77	85	46	47	49	56
RSD (preferred)	4	2	3	2	10	5	8	6	2	13
CPUE (total)	0.9	1.2	1.3	2.2	1.2	0.9	0.6	1.8	2.1	0.9
CPUE $\geq$ Stock	0.9	1.2	1.2	2.2	1.2	0.8	0.6	1.6	2.1	0.9
CPUE $\geq$ 15-inches	0.7	1.1	1.1	2.0	1.2	0.8	0.6	1.6	2.1	0.9
<b>Growth</b> (gill netting) (w alleye nets)										
Length Age-2	16.8	18.3	16.3	17.3	-	18.0	-	17.6	-	-
Length Age-3	23.3	22.8	22.5	22.0	-	23.1	-	23.1	-	-
<b>Condition</b> (gill netting) (w alleye nets)										
Stock	93.1	89.5	97.2	92.9	99.4	92.7	92.8	93.1	94.1	96.2
Quality	96.6	93.1	88.1	90.9	92.6	88.3	87.6	89.2	91.8	87.7
Preferred	84.6	94.1	-	84.3	84.2	72.4	-	81.9	82.5	78.5
Memorable	-	-	-	-	-	-	-	-	-	-
<b>Stocking</b>										
#	129,811	103,997	108,103	106,676	103,201	119,949	106,586	104,228	109,330	107,415
#/Acre	3.8	3.0	3.2	3.1	3.0	3.5	3.1	3.0	3.2	3.1
<b>Angling Pressure</b> (creel)										
Angler Hours	60,975	41,428	33,232	62,133	26,507	-	34,918	19,258	65,708	35,324
Angler Hours/Acre	1.8	1.2	1.0	1.8	0.8	-	1.0	0.6	1.9	1.0
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.17	0.28	0.26	0.08	0.18	-	0.27	0.20	0.22	0.39
Harvest Rate (intended)	0.01	0.04	0.04	0.02	0.00	-	0.12	0.07	0.06	0.10
% Released	85.7%	91.0%	75.7%	74.0%	98.3%	-	63.3%	68.4%	69.5%	76.1%
Mean Weight	10.54	7.79	10.23	12.30	9.05	-	10.84	10.45	12.60	10.84
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Striped Bass	\$255,210	\$134,910	\$293,220	\$261,760	\$67,250	-	\$292,310	\$100,540	\$551,890	\$423,490

**Walleye**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (gill netting)										
Substock CPUE	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Density</b> (gill netting)										
PSD	99	96	93	95	89	99	93	98	98	97
RSD (preferred)	21	13	13	25	27	17	22	19	35	32
CPUE (total)	5.8	2.8	5.8	6.2	6.2	6.5	8.2	5.4	6.3	8.1
CPUE ≥ Stock	5.8	2.8	5.8	6.2	6.2	6.5	8.2	5.4	6.3	8.1
CPUE ≥ MLL (15-inches)	5.7	2.6	5.4	5.9	5.5	6.5	7.6	5.2	6.2	7.9
<b>Growth</b> (gill netting)										
Length Age-1	10.6	11.7	12.1	12.8	-	-	-	11.6	-	-
Length Age-3	18.2	18.4	18.3	18.9	-	18.9	-	18.0	-	17.1
<b>Condition</b> (gill netting)										
Stock	90.9	88.3	93.1	91.6	92.5	88.9	91.1	93.1	91.8	95.2
Quality	88.8	85.8	89.3	89.3	90.6	89.3	88.5	89.2	91.1	91.7
Preferred	85.5	84.4	83.7	88.2	88.1	88.8	86.5	88.5	91.0	90.0
Memorable	-	-	-	-	87.0	-	82.4	80.9	-	85.9
<b>Mortality</b> (gill netting)										
Total Mortality	43.0%	-	32.0%	40.0%	-	-	-	45.0%	-	-
<b>Stocking</b>										
#	179,250	197,472	187,589	170,066	194,584	284,146	194,291	240,267	212,123	198,837
#/Acre	5.2	5.8	5.5	5.0	5.7	8.3	5.7	7.0	6.2	5.8
<b>Angling Pressure</b> (creel)										
Angler Hours	48,526	45,729	40,665	20,597	43,013	-	30,013	21,801	11,240	12,944
Angler Hours/Acre	1.4	1.3	1.2	0.6	1.3	-	0.9	0.6	0.3	0.4
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.10	0.06	0.08	0.08	0.03	-	0.12	0.11	0.21	0.33
Harvest Rate (intended)	0.09	0.05	0.07	0.05	0.02	-	0.10	0.11	0.11	0.30
% Released	10.2%	13.9%	18.5%	43.3%	57.1%	-	18.5%	11.1%	49.7%	16.0%
Mean Weight	2.11	2.22	2.29	3.45	2.89	-	2.74	3.18	1.75	2.86
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Walleye	\$124,200	\$176,350	\$200,580	\$31,420	\$102,450	-	\$105,530	\$37,850	\$34,360	\$16,470

**Sunfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all sunfish)	11,096	21,485	25,006	36,133	13,787	-	17,128	16,305	7,400	20,501
Angler Hours/Acre	0.3	0.6	0.7	1.1	0.4	-	0.5	0.5	0.2	0.6
<b>Fishing Success</b> (creel)										
Catch Rate (any sunfish)	2.82	4.01	2.24	2.26	1.03	-	2.55	3.75	2.42	4.07
Harvest Rate (any sunfish)	1.11	1.47	1.17	1.30	0.32	-	1.27	2.10	1.63	2.08
% Released (bluegill)	60.7%	68.2%	61.8%	55.1%	86.9%	-	37%	-	48.3%	60.3%
Mean Weight (bluegill)	0.31	0.27	0.25	0.34	0.32	-	0.39	-	0.31	0.37
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Sunfish	\$36,950	\$54,890	\$70,350	\$54,520	\$24,300	-	\$35,910	\$38,160	\$17,190	\$44,810

**Catfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all catfish)	1,180	2,488	345	3,895	3,801	-	1,314	2,840	677	1,590
Angler Hours/Acre	0.0	0.1	0.0	0.1	0.1	-	0.0	0.1	0.0	0.0
<b>Fishing Success</b> (creel)										
Catch Rate (any catfish)	0.00	0.11	0.00	0.00	0.26	-	0.25	0.74	0.00	0.05
Harvest Rate (any catfish)	0.00	0.11	0.00	0.00	0.26	-	0.25	0.74	0.00	0.05
% Released (channel)	91.3%	70.9%	65.0%	65.4%	46.5%	-	84%	40.9%	46.8%	81.6%
Mean Weight (channel)	2.16	1.34	1.44	1.27	2.44	-	3.55	3.48	2.90	4.30
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Catfish	\$1,660	\$3,590	-	-	\$2,880	-	\$1,550	-	-	-

**Shad**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (Summer Shad Gill Netting) (geometric means)										
Alewife CPUE	0.1	1.6	1.6	1.2	-	-	0.5	0.6	0.1	-
Gizzard CPUE	0.9	1.7	1.3	1.2	-	-	1.7	0.9	0.8	-
Threadfin CPUE	1.1	6.2	3.2	1.3	-	-	0.2	0.5	1.2	-

**Habitat Enhancement**

Type of Work	Details	Quantity	
		New	Renovated
none			

**Water Quality Monitoring**

Parameter	Sampling Period	Water Quality
Temperature	July - August	Normal
Dissolved Oxygen	July - August	Normal
PH	July - August	Normal
Conductivity	July - August	Normal

## Patrick Henry Reservoir

### Description

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<b>Surface Area:</b> 872 acres	<b>Shoreline Distance:</b> 127 miles
<b>Counties:</b> Sullivan	<b>Drainage Area:</b> 1903 square miles
<b>Full Pool Elevation:</b> 1263 feet above mean sea level	<b>Mean Annual Fluctuation:</b> 5 feet
<b>Maximum Depth:</b> 76 feet	<b>Thermocline Depth:</b> 9 feet
<b>Mean Chlorophyll (Forebay):</b> 11.1 parts per million	<b>Shoreline Development:</b> 34%
<b>Trophic Status (Forebay):</b> Mesotrophic	<b>Trophic Index, Carlson (1977):</b> 54.2
<b>Hydraulic Retention Time:</b> 38 days	<b>Reservoir Age:</b> 62 years (dam completed 1953)
<b>Total Fishing Effort:</b> N/A	<b>Total Value by Anglers:</b> N/A

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### Summary:

#### Electrofishing

The 2015 largemouth bass catch rates were below average. The low largemouth catch rates could be due to cooler water temperatures. The overall size structure of largemouth bass in the reservoir was good. A PSD value of 81 indicates that the population is slightly dominated by larger fish. An RSD-P value of 36 indicates that the population also had a desired proportion of preferred length (15-inch) in the population. The relative weights for the larger fish were above average for East Tennessee reservoirs; this is probably due to the good forage base of larger gizzard shad in the reservoir.

Smallmouth bass catch rates were well above average this year, with a catch rate of 37.6 fish/hour. The catch rate for smallmouth bass over the 18-inch minimum size limit was about average. Hopefully, the increase in larger size smallmouth bass will continue in this reservoir and will lead to a higher quality smallmouth bass fishery. The relative weights for smallmouth were about average for east Tennessee reservoirs.

We are also starting to see some of the Rockcastle strain walleye showing up in our samples. We collected three walleye in 2014. We also collected 2 during the 2015 reservoir sample. The stream survey crew collected 11 fish near Boone dam. This is very promising and shows good survival of stocked fish.

#### Gill Netting

There was not any gillnetting conducted on Ft. Patrick Henry in 2015. With the continued stocking efforts for the rockcastle strain walleye, we plan to continue to monitor this population through electrofishing and gillnetting.

#### Trap Netting

There was no trap netting conducted on Ft. Patrick Henry reservoir in 2015.

#### Habitat Enhancement

There were 20 reef balls placed in Ft. Patrick Henry reservoir near Warriors Path State Park.

**Water Quality**

There was no water quality sampling conducted on Ft. Patrick Henry in 2015.

**Lakewide Angling Summary****Total Effort and Expenditures**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Angling Pressure										
Angler Hours	no survey	no survey	no survey	no survey	no survey	no survey	no survey	63,434	no survey	no survey
Angler Hours Per Acre	no survey	no survey	no survey	no survey	no survey	no survey	no survey	72.8	no survey	no survey
Angler Trips	no survey	no survey	no survey	no survey	no survey	no survey	no survey	15,491	no survey	no survey
Value of Fishery (angler expenditures creel)										
All Species	no survey	no survey	no survey	no survey	no survey	no survey	no survey	\$177,420	no survey	no survey

**Largemouth Bass, Patrick Henry****Largemouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	16.8	3.2	12.8	13.6	8.0	9.6	11.2	6.4	7.2	7.2	9.6
<b>Density</b> (electrofishing data - CPUE = # fish/hour)											
PSD	79%	79%	76%	70%	50%	78%	73%	76%	66%	81%	73%
RSD - Preferred	60%	47%	40%	49%	32%	57%	45%	53%	36%	36%	46%
CPUE	55.2	33.6	52.8	78.4	67.2	70.4	88.8	62.4	66.4	36.0	61.1
CPUE ≥ Stock	38.4	30.4	40.0	64.8	59.2	60.8	77.6	56.0	59.2	28.8	51.5
<b>Growth</b> (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	86.0	90.7	89.5	87.9	90.8	84.0	82.0	84.4	80.8	85.3	86.1
Quality - Preferred	82.8	94.2	93.9	98.0	91.4	93.1	88.6	96.7	87.4	92.8	91.9
Preferred - Memorable	94.9	96.8	100.8	98.5	102.6	100.7	93.8	103.7	93.4	93.7	97.9
Memorable - Trophy	102.4	none	117.8	94.2	104.8	98.8	105.1	106.3	109.0	101.3	104.4
Trophy	none	none	none	none	none	none	none	none	none	none	none
<b>Mortality</b> (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Smallmouth Bass, Patrick Henry**

<b>Smallmouth Bass</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	11.2	8.0	11.2	5.6	9.6	7.2	2.4	2.4	5.6	7.2	7.0
<b>Density</b> (electrofishing data - CPUE = # fish/hour)											
PSD	58%	67%	52%	67%	63%	74%	93%	76%	78%	76%	70%
RSD - Preferred	42%	52%	24%	48%	54%	51%	75%	59%	50%	45%	50%
CPUE	26.4	29.6	37.6	22.4	28.8	38.4	34.4	16.0	34.4	37.6	30.6
CPUE ≥ Stock	15.2	21.6	26.4	16.8	19.2	31.2	32.0	13.6	28.8	30.4	23.5
CPUE ≥ MSL (18")*	N/A	N/A	3.2	0.8	1.6	4.0	7.2	4.0	1.6	3.2	3.2
<b>Growth</b> (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	83.0	93.2	84.8	81.7	78.4	79.1	76.6	78.6	77.9	77.0	81.0
Quality - Preferred	81.1	81.2	85.5	85.2	83.0	87.6	83.6	79.5	80.1	87.0	83.4
Preferred - Memorable	80.7	82.8	84.6	86.3	84.0	84.4	79.8	88.4	76.0	80.7	82.8
Memorable - Trophy	81.0	85.2	81.4	104.5	76.8	84.6	79.8	85.7	73.5	101.3	85.4
Trophy	none	none	none	none	none	none	none	none	none	none	none
<b>Mortality</b> (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



**Habitat Enhancement - 2015**

Type of Work	Details	Quantity	
		New	Renovated
Planted	n/a		
Rebrushed	n/a		
Reef Balls		20	
Rebrushed	n/a		
Added	n/a		
Installed	n/a		

**Water Quality Monitoring - 2015**

Parameter	Sampling Period	Water Quality
Temperature	July to September	n/a
Dissolved Oxygen	July to September	n/a

## South Holston Reservoir

### Description

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<b>Surface Area:</b> 7,580 acres	<b>Shoreline Distance:</b> 182 miles
<b>Counties:</b> Sullivan, Washington (VA)	<b>Drainage Area:</b> 703 square miles
<b>Full Pool Elevation:</b> 1,729 feet above mean sea level	<b>Mean Annual Fluctuation:</b> 39 feet
<b>Maximum Depth:</b> 245 feet	<b>Thermocline Depth:</b> 13 feet
<b>Mean Chlorophyll (Forebay):</b> 4.2 parts per million	<b>Shoreline Development:</b> 14%
<b>Trophic Status (Forebay):</b> Mesotrophic	<b>Trophic Index, Carlson (1977):</b> 44.7
<b>Hydraulic Retention Time:</b> 340 days	<b>Reservoir Age:</b> 65 years (dam completed 1950)
<b>Total Fishing Effort:</b> N/A	<b>Total Value by Anglers:</b> N/A

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### Summary:

#### Electrofishing

There was no electrofishing conducted on South Holston Reservoir in 2015 due to targeted smallmouth electrofishing on other reservoirs in Region 4.

#### Gill Netting

On December 8, 2015 we collected 64 walleye in six experimental gill nets on South Holston Reservoir. The gill nets were set from Observation Knob Park downstream to Big Creek.

The catch rates were average at 10.7 fish per net night. A large percentage of the fish collected (67%) were above the 18-inch size limit, indicating that the fish are recruiting into the larger size classes.

These catch rates combined with the large percentage of walleye collected over 18-inches should indicate that the walleye fishing will be good on South Holston Reservoir in 2016.

#### Trap Netting

There was no trap netting conducted on South Holston Reservoir in 2015.

#### Habitat Enhancement

There was no habitat enhancement on South Holston Reservoir in 2015.

#### Water Quality

Water quality samples were collected at two sites on South Holston Reservoir during July, August, and September 2015. The results from these samples were normal for South Holston Reservoir.

**Lakewide Angling Summary****Total Effort and Expenditures**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Angling Pressure										
Angler Hours	124,909	121,926	no survey	no survey	no survey	no survey	169,822	no survey	no survey	164,139
Angler Hours Per Acre	19.8	19.2	no survey	no survey	no survey	no survey	26.7	no survey	no survey	21.7
Angler Trips	19,198	18,866	no survey	no survey	no survey	no survey	26,499	no survey	no survey	26,676
Value of Fishery (angler expenditures creel)										
All Species	\$222,450	\$216,640	no survey	no survey	no survey	no survey	\$683,760	no survey	no survey	\$507,250

**Black Bass, South Holston Reservoir****Black Bass**

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Angling Pressure (creel survey data)												
All Black Bass	(hrs)	75,404	72,371	N	O	80,172	129,756	115,096	N	O	121,227	99,004
	(hrs/acre)	9.9	9.5			10.6	17.1	15.1			16.0	13.0
Any Black Bass	(hrs)	66,909	64,527	S	S	76,226	126,178	106,061	S	S	112,882	92,131
	(hrs/acre)	8.8	8.5			10.1	16.6	14.0			14.9	12.2
Largemouth Bass	(hrs)	0	280	U	U	0	1,176	192	U	U	1,346	499
	(hrs/acre)	0.0	0.0			0.0	0.2	0.0			0.2	0.1
Smallmouth Bass	(hrs)	8,495	7,564	V	V	3,946	2,402	8,843	V	V	6,316	6,261
	(hrs/acre)	1.1	1.0			0.5	0.3	1.2			0.8	0.8
Spotted Bass	(hrs)	0	0	Y	Y	0	0	0	Y	Y	683	114
	(hrs/acre)	0.0	0.0			0.0	0.0	0.0			0.1	0.0
Tournaments (BITE program & creel survey data)												
# Tournaments (BITE)		1	none	none	none	none	none	none	none	none	none	1
Pounds/Angler Day (BITE)		1.92	reported	reported	reported	reported	reported	reported	reported	reported	reported	1.92
Bass/Angler Day (BITE)		1.31										1.31
Value of Fishery (creel survey data - trip expenditures)												
All Black Bass		\$147,040	\$144,320	No Survey	No Survey	\$390,100	\$655,920	\$492,350	No Survey	No Survey	\$439,120	\$378,142
Any Black Bass		\$134,640	\$136,890			\$374,510	\$616,810	\$455,770			\$404,160	\$353,797
Largemouth Bass		\$0	\$1,270	No Survey	No Survey	\$0	\$21,740	\$1,190	No Survey	No Survey	\$12,080	\$6,047
Smallmouth Bass		\$12,400	\$6,160			\$15,590	\$17,370	\$35,390			\$21,550	\$18,077
Spotted Bass		\$0	\$0			\$0	\$0	\$0			\$1,330	\$222

**Largemouth Bass, South Holston Reservoir**

Largemouth Bass											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Recruitment (electrofishing data)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A
Substock CPUE	2.2	0.4	2.4	1.5	5.2	3.6	2.0	1.2	1.8	no survey	2.3
Density (electrofishing data - CPUE = # fish/hour)											
PSD	81%	82%	83%	79%	73%	81%	81%	81%	85%	no survey	81%
RSD - Preferred	44%	59%	53%	55%	46%	48%	44%	43%	58%	no survey	50%
CPUE	12.6	19.2	35.8	29.2	37.6	27.1	18.2	23.2	23.8	no survey	25.2
CPUE ≥ Stock	10.4	18.8	33.4	27.7	32.4	23.5	16.2	22.0	22.0	no survey	22.9
CPUE ≥ MSL	N o M i n i m u m S i z e L i m i t										
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A
Relative Weight (electrofishing data)											
Stock - Quality	91.9	96.3	92.8	88.7	88.4	84.2	86.3	87.1	86.7	no survey	89.2
Quality - Preferred	93.0	99.2	97.3	94.3	95.0	94.3	93.1	91.7	91.2	no survey	94.3
Preferred - Memorable	89.8	99.7	101.2	97.7	97.7	93.3	92.6	93.7	94.6	no survey	95.6
Memorable - Trophy	89.0	93.7	97.4	93.2	91.5	89.3	91.2	96.1	92.4	no survey	92.6
Trophy	none	none	none	none	none	none	none	none	none	no survey	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	0.05	0.05	No	No	0.15	0.15	0.15	No	No	0.26	0.14
Harvest Rate	0.00	0.01			0.00	0.00	0.00			0.01	0.00
Percent Harvested	8.1%	11.3%	Survey	Survey	2.7%	2.9%	3.1%	Survey	Survey	2.0%	5.0%
Mean Weight (pounds)	2.05	2.11			5.66	1.61	3.8			2.38	2.9

**Smallmouth Bass, South Holston Reservoir**

<b>Smallmouth Bass</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (electrofishing data)											
Age-1 CPUE	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	1
Substock CPUE	2.4	1.0	1.8	1.4	4.8	1.6	2.2	1.0	3.2	no survey	2.2
<b>Density</b> (electrofishing data - CPUE = # fish/hour)											
PSD	41%	69%	80%	87%	77%	82%	56%	82%	70%	no survey	72%
RSD - Preferred	29%	46%	47%	57%	64%	63%	33%	65%	49%	no survey	50%
CPUE	10.6	21.6	27.2	21.4	26.8	37.8	16.20	25.8	28.8	no survey	24.0
CPUE ≥ Stock	8.2	20.6	25.4	20.0	22.0	36.3	14.00	24.8	25.6	no survey	21.9
CPUE ≥ MSL*	N/A	N/A	5.6	1.4	11.0	17.7	3.2	10.2	8.6	no survey	8.2
<b>Growth</b> (electrofishing data)											
Mean TL at Age-1 (mm)	129	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	129
Mean TL at Age-3 (mm)	324	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	324
<b>Relative Weight</b> (electrofishing data)											
Stock - Quality	89.2	88.4	93.8	92.6	92.2	88.6	81.9	86.8	81.2	no survey	88.3
Quality - Preferred	93.9	89.6	98.4	92.4	90.1	94.4	92.0	89.2	86.0	no survey	91.8
Preferred - Memorable	96.0	97.1	94.4	91.8	92.3	96.2	92.8	88.6	84.4	no survey	92.6
Memorable - Trophy	90.3	94.5	90.7	90.0	86.0	94.4	89.1	89.7	80.4	no survey	89.5
Trophy	none	none	none	none	none	none	none	none	none	no survey	none
<b>Mortality</b> (electrofishing data)											
Total Mortality	0.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.48
<b>Fishing Success</b> (creel survey data)											
Catch Rate	0.17	0.16	No	No	0.40	0.33	0.43	No	No	0.38	0.31
Harvest Rate	0.01	0.02			0.03	0.04	0.02			0.01	0.02
Percent Harvested	7.8%	14.2%	Survey	Survey	8.0%	10.5%	4.6%	Survey	Survey	2.9%	8.0%
Mean Weight (pounds)	2.64	2.44			3.64	3.54	3.32			3.98	3.26

**Spotted Bass, South Holston Reservoir**

Spotted Bass											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Recruitment (electrofishing data)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A
Substock CPUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	no survey	0.0
Density (electrofishing data - CPUE = # fish/hour)											
PSD	none	none	none	none	none	none	none	none	none	no survey	none
RSD - Preferred	none	none	none	none	none	none	none	none	none	no survey	none
CPUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	no survey	0.0
CPUE ≥ Stock	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	no survey	0.0
CPUE ≥ MSL	N o M i n i m u m S i z e L i m i t										
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A
Relative Weight (electrofishing data)											
Stock - Quality	none	none	none	none	none	none	none	97.3	118.2	no survey	107.75
Quality - Preferred	none	none	none	none	none	none	none	none	none	no survey	none
Preferred - Memorable	none	none	none	none	none	none	none	none	none	no survey	none
Memorable - Trophy	none	none	none	none	none	none	none	none	none	no survey	none
Trophy	none	none	none	none	none	none	none	none	none	no survey	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	none	none	none	none	none	none	none	none	none	0.01	0.01
Harvest Rate	none	none	none	none	none	none	none	none	none	0.01	0.01
Percent Harvested	none	none	none	none	none	none	none	none	none	41%	41.3%
Mean Weight (pounds)	none	none	none	none	none	none	none	none	none	1.73	1.73

**Black Crappie, South Holston Reservoir**

Black Crappie											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Recruitment (electrofishing data) - CPUE = # fish/ hour											
Age-0 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A
Substock CPUE	0.0	0.0	0.0	0.0	0.4	0.0	0.00	0.4	0.2	no survey	0.1
Density (electrofishing data) - CPUE = # fish/ hour											
PSD	87%	98%	99%	95%	100%	88%	98%	96%	76%	no survey	93%
RSD - Preferred	62%	74%	86%	79%	89%	44%	71%	80%	49%	no survey	70%
CPUE	10.4	18.2	34.6	17.5	11.0	22.6	11.6	21.0	29.4	no survey	19.6
CPUE ≥ Stock	10.4	18.2	34.6	17.5	10.6	22.6	11.6	20.6	29.2	no survey	19.5
CPUE ≥ MSL (10")	6.0	11.0	26.6	13.3	9.0	11.2	6.6	15.0	12.8	no survey	12.4
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	254
Relative Weight (electrofishing data)											
Stock - Quality	98.5	96.3	95.8	99.7	none	103.2	90.7	93.1	95.3	no survey	96.6
Quality - Preferred	100.3	99.2	96.3	99.4	105.3	103.6	96.6	96.4	95.5	no survey	99.2
Preferred - Memorable	97.2	97.2	95.8	91.0	96.2	96.9	98.4	92.1	92.6	no survey	95.3
Memorable - Trophy	90.0	93.7	91.3	87.4	91.4	94.2	90.6	90.3	88.9	no survey	90.9
Trophy	none	none	none	none	none	none	none	none	none	no survey	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no survey	N/A
Stocking											
# per Acre	0.0	0.0	0.0	0.0	0.0	9.7	0.0	8.3	9.5	8.0	3.6
Angling Pressure (creel survey data - any crappie)											
Angler Hours	11,595	7,564	N o	N o	6,003	3,746	1,743	N o	N o	8,437	6,515
Angler Hours/Acre	1.5	1.0			0.8	0.5	0.2			1.1	0.2
Fishing Success (creel survey data)											
Catch Rate	0.12	0.13	S	S	0.77	1.24	2.44	S	S	1.41	1.02
Harvest Rate	0.09	0.09	u	u	0.46	0.80	1.84	u	u	0.70	0.66
Percent Harvested	64.2%	62.2%	r	r	72.4%	77.9%	46.5%	r	r	65.5%	64.8%
Mean Weight (pounds)	0.94	0.89	v	v	1.22	1.06	0.83	v	v	1.39	1.055
Value of Fishery (creel survey data - trip expenditures)											
Any Crappie	\$17,840	\$11,200			\$9,580	\$4,790	\$3,830			\$14,310	\$10,258

**Walleye, South Holston Reservoir**

<b>Walleye</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Recruitment</b> (winter gill net data)											
Substock CPUE	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
<b>Density</b> (winter gill net data - CPUE = # fish/net night)											
PSD	91%	93%	79%	92%	85%	95%	95%	93%	100%	92%	92%
RSD - Preferred	38%	59%	45%	22%	27%	22%	43%	60%	54%	45%	42%
CPUE	8.3	6.3	12.6	10.9	14.8	12.2	9.3	6.7	15.0	10.7	10.7
CPUE ≥ Stock	8.2	6.3	12.6	10.9	14.8	12.2	9.3	6.7	15.0	10.7	10.7
CPUE ≥ MSL (18")	4.17	4.86	8.08	5.00	9.50	7.16	7.0	5.0	11.30	7.0	6.91
<b>Growth</b> (winter gill net data)											
Mean TL at Age-1 (mm)	411	415	450	434	435	434	no sample	452	no sample	436	433
Mean TL at Age-3 (mm)	539	537	524	525	516	515	no sample	518	no sample	548	528
<b>Relative Weight</b> (winter gill net data)											
Stock - Quality	105.5	99.7	103.4	104.0	90.7	92.9	99.4	98.6	none	97.2	99.1
Quality - Preferred	96.4	95.1	103.6	96.5	97.4	97.1	97.9	105.2	97.8	101.0	98.8
Preferred - Memorable	97.1	97.3	101.7	94.2	96.1	97.6	100.3	102.6	99.2	101.4	98.7
Memorable - Trophy	93.7	96.7	none	87.6	91.6	none	none	99.5	99.7	99.5	95.5
Trophy	none	none	none	none	none	none	none	none	none	none	none
<b>Mortality</b> (winter gill net data)											
Total Mortality	48%	N/A	N/A	32%	N/A	N/A	N/A	N/A	N/A	N/A	40%
<b>Stocking*</b>											
# per Acre	7.5	5.1	5.4	3.3	5.8	0.0	0.0	0.0	0.0	0.0	2.7
<b>Angling Pressure</b> (creel survey data - walleye data only)											
Angler Hours	17,580	21,543	N	N	9,040	13,584	28,600	N	N	4,573	15,820
Angler Hours/Acre	2.32	2.84			1.19	1.79	3.77	o	o	0.60	1.56
<b>Fishing Success</b> (creel survey data - walleye data only)											
Catch Rate	not calculated	not calculated	S	S	not calculated	not calculated	not calculated	S	S	not calculated	not calculated
Harvest Rate	not calculated	not calculated	u	u	not calculated	not calculated	not calculated	u	u	not calculated	not calculated
Percent Harvested	55.5%	59.0%	r	r	73.0%	87.8%	80.0%	r	r	93.1%	74.7%
Mean Weight (pounds)	3.32	3.35	v	v	5.27	4.30	4.24	v	v	6.08	4.43
<b>Value of Fishery</b> (creel survey data - trip expenditures)											
Walleye Data Only	\$33,010	\$37,930			\$30,550	\$50,210	\$107,070	y	y	\$10,210	\$44,830



**Trout, South Holston Reservoir**

Trout		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Angling Pressure (creel survey data)												
All Trout	(hrs)	8,287	10,467	N	N	16,574	27,644	10,646	N	N	14,911	12,647
	(hrs/acre)	1.1	1.4			2.2	3.6	1.4			2.0	2.0
Any Trout	(hrs)	6,565	10,099	S	S	10,212	13,422	1,703	S	S	5,317	7,886
	(hrs/acre)	0.9	1.3			1.3	1.8	0.2			0.7	1.0
Rainbow Trout	(hrs)	1,722	368	U	U	1,672	3,968	673	U	U	0	1,401
	(hrs/acre)	0.2	0.0			0.2	0.5	0.1			0.0	0.2
Brown Trout	(hrs)	0	0	V	V	0	0	0	V	V	0	0
	(hrs/acre)	0.0	0.0			0.0	0.0	0.0			0.0	0.0
Lake Trout	(hrs)	0	0	E	E	4,690	10,254	8,270	E	E	9,594	5,468
	(hrs/acre)	0.0	0.0			0.1	0.1	1.1			1.3	0.4
Value of Fishery (creel survey data - trip expenditures)												
All Trout	No Survey	\$13,520	No Survey	No Survey	\$41,270	\$73,710	\$35,380	No Survey	No Survey	\$22,340	\$33,077	
Any Trout		\$12,740			\$24,740	\$26,080	\$4,610			\$12,130	\$15,013	
Rainbow Trout		\$780			\$3,370	\$17,090	\$3,730			\$0	\$4,572	
Brown Trout		\$0			\$0	\$0	\$0			\$0		
Lake Trout		\$0			\$13,160	\$30,540	\$27,040			\$10,210	\$13,492	

**Lake Trout, South Holston Reservoir**

Lake Trout		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Fishing Success</b> (creel survey data)												
Catch Rate	none	none	No	No	not calculated	not calculated	not calculated	No	No	not calculated	not calculated	
Harvest Rate	none	none										
Percent Harvested	none	none	Survey	Survey	67.5%	61.1%	37.9%	Survey	Survey	60.3%	56.7%	
Mean Weight (pounds)	none	none			3.66	4.46	4.09			5.43	4.41	

**Sunfish, South Holston Reservoir**

Sunfish		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Angling Pressure (creel survey data - any sunfish)												
Angler Hours	*	233	792	N	N	3,773	13,434	1,604	N	N	6,431	4,378
Angler Hours/Acre		0.03	0.10			0.50	1.77	0.20			0.80	0.14
Fishing Success (creel survey data - bluegill only)												
Catch Rate (bluegill)		4.61	1.52	S	S	1.80	1.68	1.49	S	S	1.58	2.11
Harvest Rate (bluegill)		1.51	0.35	u	u	0.02	0.18	0.34	u	u	0.00	0.40
% Harvested (bluegill)		9.8%	15.6%	r	r	2.3%	6.7%	3.9%	r	r	0.0%	6.4%
Mean Weight (bluegill)		0.23	0.26	v	v	0.37	0.33	none	v	v	none	0.30
Value of Fishery (creel survey data - trip expenditures)												
Any Sunfish		\$290	\$530	y	y	\$4,220	\$21,870	\$3,730	y	y	\$6,960	\$6,267

\* Bluegill only

**Catfish, South Holston Reservoir**

Catfish											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
Angling Pressure (creel survey data - any catfish)											
Angler Hours	851	3,106	N o	N o	468	890	131	N o	N o	252	950
Angler Hours/Acre	0.11	0.41			0.06	0.12	0.01			0.03	0.03
Fishing Success (creel survey data)											
Catch Rate (channel cat)	0.18	0.11	S u r v e y	S u r v e y	0.37	0.14	0.00	S u r v e y	S u r v e y	0.00	0.13
Harvest Rate (channel cat)	0.18	0.11			0.08	0.13	0.00			0.00	0.08
% Harvested (channel cat)	40.4%	65.2%			16.6%	42.5%	21.5%			0.0%	31.0%
Mean Weight (channel cat)	2.85	2.93			3.14	3.09	4.19			none	3.24
Value of Fishery (creel survey data - trip expenditures)											
Any Catfish	\$2,090	\$2,960			\$2,590	\$2,160	\$3,810			\$370	\$2,330

**Shad, South Holston Reservoir**

<b>Shad</b>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Mean
<b>Density</b> (summer shad gill net data - geometric mean density)											
Gizzard Shad	1.3	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	1.30
Threadfin Shad	2.7										2.70
Alewife	0.2										0.20

**Habitat Enhancement South Holston Reservoir**

Type of Work	Details	Quantity	
		New	Renovated
Rebrushed	Christmas trees in groups of 5 ,with anchors		4 sites, 365 Trees
Rebrushed	Brush lines approx. 50 feet long		15 brush lines, 750 units
Installed	Brush lines approx 50 feet long	10 Brush lines, 500 units	

**Water Quality Monitoring South Holston Reservoir**

Parameter	Sampling Period	Water Quality
Temperature	July to September	normal
Dissolved Oxyged	July to September	normal

## Tellico Reservoir

### Description

**Area:** 16,056 acres

**Shoreline:** 357 miles

**Counties:** Monroe, Blount, Loudon

**Full Pool Elevation (feet-msl):** ~813

**Winter Pool Elevation (feet-msl):** ~807

**Dam Completion:** 1979

### Summary:

### Lakewide Angling Summary

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
Angler Hours	226,458	190,448	-	-	132,151	112,382	-	147,269	-	109,693
Angler Hours Per Acre	14.1	11.9	-	-	8.2	7.0	-	9.2	-	6.6
Angler Trips	48,705	42,112	-	-	31,780	24,543	-	31,374	-	24,970
<b>Value of Fishery (angler expenditures creel)</b>										
All Species	\$673,860	\$679,630	-	-	\$586,930	\$497,340	-	\$609,580	-	\$422,800

### Black Bass

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b>										
All Black Bass (hrs)	105,515	80,036	-	-	50,590	44,266	-	58,837	-	47,929
All Black Bass (hrs/acre)	6.57	4.98	-	-	3.15	2.76	-	3.66	-	2.90
Any Black Bass (hrs)	105,515	80,036	-	-	1,086	328	-	0	-	15,687
Any Black Bass (hrs/acre)	6.57	4.98	-	-	0.07	0.02	-	0.00	-	0.95
Largemouth Bass (hrs)	0	0	-	-	44,988	42,739	-	56,708	-	32,058
Largemouth Bass (hrs/acre)	0.00	0.00	-	-	2.80	2.66	-	3.53	-	1.94
Smallmouth Bass (hrs)	0	0	-	-	4,516	1,199	-	2,129	-	184
Smallmouth Bass (hrs/acre)	0.00	0.00	-	-	0.28	0.07	-	0.13	-	0.01
Spotted Bass (hrs)	0	0	-	-	0	0	-	0	-	0
Spotted Bass (hrs/acre)	0.00	0.00	-	-	0.00	0.00	-	0.00	-	0.00
<b>Value of Fishery (Trip Expenditures)</b>										
All Black Bass	\$374,920	\$389,330	-	-	\$272,450	\$218,140	-	\$338,880	-	\$240,030
Any Black Bass	\$374,920	\$389,330	-	-	\$4,740	\$1,810	-	\$0	-	\$89,740
Largemouth Bass	\$0	\$0	-	-	\$242,470	\$210,210	-	\$328,930	-	\$149,720
Smallmouth Bass	\$0	\$0	-	-	\$25,240	\$6,120	-	\$9,950	-	\$570
Spotted Bass	\$0	\$0	-	-	\$0	\$0	-	\$0	-	\$0

**Largemouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										target
Substock CPUE	5.70	15.00	11.30	4.00	8.67	-	-	6.33	3.67	-
<b>Density</b> (electrofishing)										
PSD	45	65	57	72	65	-	-	62	61	-
RSD (preferred)	12	15	12	15	11	-	-	16	11	-
CPUE (total)	48.7	37.0	56.0	44.0	58.7	-	-	48.0	54.7	-
CPUE $\geq$ Stock	43.0	22.0	44.7	40.0	50.0	-	-	41.7	51.0	-
CPUE $\geq$ MLL (14-inches)	10.3	4.0	8.0	9.6	10.3	-	-	12.3	8.6	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	7.3
Length Age-3	-	-	-	-	-	-	-	-	-	12.8
<b>Condition</b> (spring electrofishing)										
Stock	79.0	80.4	80.1	77.7	81.5	-	-	78.9	76.7	81.8
Quality	81.7	80.2	80.8	78.4	79.7	-	-	78.8	81.1	85.2
Preferred	92.2	85.8	87.0	83.7	86.0	-	-	86.6	79.9	93.0
Memorable	95.9	87.6	86.7	85.6	88.1	-	-	90.4	96.6	99.3
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	35.0%
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	-	0.72	0.96	-	0.92	-	1.21
Harvest Rate (intended)	-	-	-	-	0.03	0.01	-	0.05	-	0.01
% Released	97.6%	98.2%	-	-	97.3%	98.9%	-	96.3%	-	98.2%
Mean Weight	2.69	1.94	-	-	2.63	1.44	-	2.88	-	1.81

**Smallmouth Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										target
Substock CPUE	2.30	2.00	0.00	0.00	1.67	-	-	0.00	0.67	-
<b>Density</b> (electrofishing)										
PSD	32	54	56	60	70	-	-	33	67	-
RSD (preferred)	9	23	11	47	26	-	-	17	17	-
CPUE (preferred)	0.7	1.0	0.3	2.4	1.7	-	-	0.7	0.3	-
CPUE (memorable)	0.0	0.0	0.0	0.0	0.7	-	-	0.0	0.0	-
CPUE (trophy)	0.0	0.0	0.0	0.4	0.0	-	-	0.0	0.0	-
CPUE (total)	9.7	6.3	3.0	6.0	10.7	-	-	4.0	2.7	-
CPUE $\geq$ Stock	7.4	4.3	3.0	6.0	9.0	-	-	4.0	2.0	-
CPUE $\geq$ Preferred	0.7	1.0	0.3	2.8	2.3	-	-	0.7	0.3	-
CPUE $\geq$ MLL (18-inches)	0.0	0.0	0.0	0.4	0.3	-	-	0.0	0.0	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	4.8
Length Age-3	-	-	-	-	-	-	-	-	-	11.9
<b>Condition</b> (spring electrofishing)										
Stock	79.7	79.8	75.3	76.3	76.2	-	-	80.6	78.7	76.5
Quality	73.4	82.1	71.0	84.7	80.8	-	-	81.3	77.3	74.8
Preferred	83.5	75.8	-	75.7	72.9	-	-	74.5	75.0	76.9
Memorable	-	-	-	-	78.3	-	-	-	-	81.6
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	34.0%
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	-	0.43	0.41	-	0.41	-	1.20
Harvest Rate (intended)	-	-	-	-	0.00	0.00	-	0.00	-	0.00
% Released	99.2%	100.0%	-	-	99.4%	100.0%	-	100.0%	-	100.0%
Mean Weight	3.40	-	-	-	1.30	-	-	-	-	-

**Spotted Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Recruitment</b> (electrofishing)										
Substock CPUE	8.00	9.00	3.00	1.20	3.00	-	-	1.33	1.33	-
<b>Density</b> (electrofishing)										
PSD	22	18	26	33	32	-	-	16	21	-
RSD (preferred)	1	1	1	-	-	-	-	5	-	-
CPUE (total)	51.3	38.7	35.7	18.4	21.7	-	-	7.7	9.3	-
CPUE $\geq$ Stock	43.3	29.7	32.7	17.2	18.7	-	-	6.3	8.0	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (spring electrofishing)										
Stock	83.8	82.5	88.2	86.0	88.3	-	-	87.6	84.9	-
Quality	74.7	76.4	80.1	79.3	84.0	-	-	77.2	78.4	-
Preferred	65.3	82.8	73.5	-	-	-	-	82.8	-	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	-	-	-	-	-	-	-	-	-	-
Harvest Rate (intended)	-	-	-	-	-	-	-	-	-	-
% Released	98.5%	100.0%	-	-	100.0%	-	-	100.0%	-	-
Mean Weight	2.10	-	-	-	-	-	-	-	-	-

**Black Crappie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (electrofishing)										
PSD	100	100	50	100	100	-	-	93	100	-
RSD (preferred)	100	100	50	100	67	-	-	47	29	-
CPUE (total)	1.3	0.7	1.3	0.4	4.0	-	-	5.0	2.3	-
CPUE $\geq$ Stock	1.3	0.7	1.3	0.4	4.0	-	-	5.0	2.3	-
CPUE $\geq$ MLL (10-inches)	1.3	0.7	0.7	0.4	2.3	-	-	2.0	0.7	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	-	-	-
Quality	-	-	-	-	80.4	-	-	79.7	76.9	-
Preferred	79.5	78.9	79.0	84.5	79.9	-	-	79.9	80.4	-
Memorable	-	-	71.0	-	74.1	-	-	73.5	70.7	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	67,903	63,333	-	-	56,778	50,778	-	53,193	-	42,261
Angler Hours/Acre	4.2	3.9	-	-	3.5	3.2	-	3.3	-	2.6
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	2.02	1.79	-	-	1.50	2.26	-	2.10	-	2.36
Harvest Rate (any crappie)	0.69	0.55	-	-	0.73	1.33	-	0.56	-	1.12
% Released (black crappie)	40.5%	25.8%	-	-	38.8%	15.5%	-	93.8%	-	0.0%
Mean Weight (black crappie)	0.95	0.73	-	-	1.33	1.10	-	1.33	-	1.04
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$179,670	\$182,140	-	-	\$227,760	\$212,670	-	\$180,740	-	\$128,860



**White Crappie**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Density</b> (electrofishing)										
PSD	100	100	100	100	100	-	-	100	97	-
RSD (preferred)	67	78	44	100	75	-	-	33	26	-
CPUE (total)	3.0	3.0	11.3	0.8	17.7	-	-	19.3	25.3	-
CPUE ≥ Stock	3.0	3.0	11.3	0.8	17.7	-	-	19.3	25.3	-
CPUE ≥ MLL (10-inches)	1.3	1.7	5.0	0.8	11.3	-	-	5.3	4.0	-
<b>Growth</b> (electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
<b>Condition</b> (electrofishing)										
Stock	-	-	-	-	-	-	-	-	87.9	-
Quality	76.9	82.6	79.1	-	83.4	-	-	82.1	77.8	-
Preferred	74.2	80.5	76.7	77.3	82.3	-	-	79.3	76.9	-
Memorable	-	76.9	78.1	-	77.6	-	-	78.4	92.9	-
<b>Mortality</b> (electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
<b>Angling Pressure</b> (creel)										
Angler Hours (all crappie)	67,903	63,333	-	-	56,778	50,778	-	53,193	-	42,261
Angler Hours/Acre	4.2	3.9	-	-	3.5	3.2	-	3.3	-	2.6
<b>Fishing Success</b> (creel)										
Catch Rate (any crappie)	2.02	1.79	-	-	1.50	2.26	-	2.10	-	2.36
Harvest Rate (any crappie)	0.69	0.55	-	-	0.73	1.33	-	0.56	-	1.12
% Released (white crappie)	69.9%	74.6%	-	-	59.4%	46.2%	-	75.8%	-	59.4%
Mean Weight (white crappie)	0.61	0.69	-	-	1.14	1.10	-	1.10	-	0.83
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Crappie	\$179,670	\$182,140	-	-	\$227,760	\$212,670	-	\$180,740	-	\$128,860

**Walleye**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Stocking</b>										
#	44,228	51,794	21,160	30,400	68,454	67,032	0	60,960	159,753	63,200
#/Acre	2.8	3.2	1.3	1.9	4.3	4.2	0.0	3.8	9.9	3.8
<b>Angling Pressure</b> (creel)										
Angler Hours	9,239	2,523	-	-	4,850	1,908	-	5,128	-	2,700
Angler Hours/Acre	0.6	0.2	-	-	0.3	0.1	-	0.3	-	0.2
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.29	0.17	-	-	0.23	0.00	-	0.12	-	0.03
Harvest Rate (intended)	0.10	0.02	-	-	0.11	0.00	-	0.05	-	0.02
% Released	68.9%	81.5%	-	-	48.6%	-	-	54.3%	-	66.7%
Mean Weight	2.93	4.08	-	-	3.35	-	-	3.41	-	3.65
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Walleye	\$31,780	\$13,310	-	-	\$33,790	\$12,260	-	\$31,580	-	\$12,970

**Striped Bass**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours	2,330	983	-	-	1,329	1,712	-	866	-	184
Angler Hours/Acre	0.1	0.1	-	-	0.1	0.1	-	0.1	-	0.0
<b>Fishing Success</b> (creel)										
Catch Rate (intended)	0.31	0.23	-	-	0.00	0.30	-	0.00	-	0.00
Harvest Rate (intended)	0.04	0.00	-	-	0.00	0.00	-	0.00	-	0.00
% Released	96.2%	98.9%	-	-	100.0%	100.0%	-	-	-	100.0%
Mean Weight	41.25	3.15	-	-	-	-	-	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
Striped Bass	\$11,730	\$3,890	-	-	\$7,870	\$27,930	-	\$4,410	-	\$1,510

**Sunfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all sunfish)	402	1,553	-	-	1,314	390	-	-	-	2,404
Angler Hours/Acre	0.0	0.1	-	-	0.1	0.0	-	-	-	0.1
<b>Fishing Success</b> (creel)										
Catch Rate (any sunfish)	2.50	2.73	-	-	1.89	1.63	-	-	-	4.28
Harvest Rate (any sunfish)	0.00	0.63	-	-	0.73	0.89	-	-	-	1.89
% Released (bluegill)	80.0%	86.9%	-	-	62.9%	88.7%	-	84.4%	-	58.7%
Mean Weight (bluegill)	0.42	0.49	-	-	0.51	0.69	-	0.56	-	0.55
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Sunfish	\$440	\$3,080	-	-	\$4,900	\$1,250	-	-	-	\$8,610

**Catfish**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Angling Pressure</b> (creel)										
Angler Hours (all catfish)	552	940	-	-	323	791	-	723	-	-
Angler Hours/Acre	0.0	0.1	-	-	0.0	0.0	-	0.0	-	-
<b>Fishing Success</b> (creel)										
Catch Rate (any catfish)	0.00	0.00	-	-	0.00	0.00	-	0.00	-	-
Harvest Rate (any catfish)	0.00	0.00	-	-	0.00	0.00	-	0.00	-	-
% Released (channel)	-	-	-	-	0.0%	22.4%	-	-	-	100.0%
Mean Weight (channel)	-	-	-	-	5.20	2.47	-	-	-	-
<b>Value of Fishery</b> (Trip Expenditures - creel)										
All Catfish	\$7,070	\$3,210	-	-	\$1,110	\$3,570	-	\$820	-	-

**Habitat Enhancement**

Type of Work	Details	Quantity	
		New	Renovated
Rebrush	none	none	none

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## Glossary

**Biomass:** weight of species or group of species expressed in pounds per acre or kilograms per hectare

**Catch-Curve:** a graph representing the relative abundance of various year-classes of a fish species. Used to measure the total mortality effecting the various year-classes present in the population.

**Density:** The abundance of fish in a population measured through catch-per-unit of effort. E.g. bass density is measured in number of fish caught per hour of electrofishing.

**Exploitation:** fish harvested or removed from the population by the fisherman. Measured through creel survey trends and catch-curve analysis.

**Florida Bass:** a subspecies of largemouth bass (*Micropterus salmoides floridanus*) native to the lower Florida peninsula. Desired for their ability to obtain relatively large sizes and advanced ages.

**Growth:** change in fish length with time. Measured as the average length of the fish at each age or length at which it enters the fishery (mean length of Age 3 bass).

**Interspecific competition:** Competition between two or more species for food or space when (and only when) either is limited.

**Memorable-Size:** The size when fish become memorable to catch (e.g. 20-25" for largemouth bass).

**Mortality:** removal of fish from the population by death, either by natural causes or harvest by a fisherman. Total mortality is a combination of both factors, and is indirectly assessed with Proportional and Relative Stock Density indices. Fishing mortality alone is measured by exploitation studies for creel census surveys.

**Preferred-size:** The size preferred by most fishermen to catch. (e.g. 15"-20" for largemouth bass).

**Proportional Stock Density:** an index that expresses the proportion of quality-sized fish to stock size fish. Used as an indirect measure of total mortality.

**Quality Size:** The size at which most fishermen begin to keep fish of a particular species (12"-15" for largemouth bass).

**Recruitment:** number of fish spawned that survived to be captured by a particular sampling gear. (e.g. for bass it is measured as the number of Age 1 bass in spring electrofishing; Crappie – number of age 0 collected with fall trapnettings).

**Relative Stock Density:** an index that expresses the proportion of preferred-size fish to stock size fish.

**Stock Size:** The age 1 and age 2 fish that will grow replace larger fish that are removed by fishing or natural death.

**Year-class:** a species group spawned in the same year.

**Young of the Year (YOY):** Fish produced during the current with an assumed birthdate of January 1. Also referred to as Age-0 fish.